

Maintenance of Supplies and Equipment

Army Materiel Maintenance Policy and Retail Maintenance Operations

**Headquarters
Department of the Army
Washington, DC
1 July 1996**

UNCLASSIFIED

SUMMARY of CHANGE

AR 750-1

Army Materiel Maintenance Policy and Retail Maintenance Operations

This Change 1--

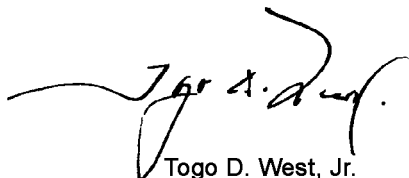
- o Deletes the Total Army Maintenance Master Plan (TAMMP) as a program and removes the policy from AR 750-1.
- o Adds detailed policy and procedure on the Army Award for Maintenance Excellence and the Secretary of Defense Phoenix Maintenance Award competitions, to include provisions for DD Form 2266.
- o Revises policy on Operational Readiness Float (ORF).
- o Updates some responsibilities for the Camouflage Pattern Painting (CPP) and Chemical Agent Resistant Coating (CARC) programs; publishes the requirement to use a project code on all depot level repair and return program equipment.
- o Revises policy on maintenance of automatic data processing equipment.
- o Publishes policy on maintenance of tactical intelligence and electronic warfare (IEW) equipment.
- o Adds management control checklists for retail level maintenance.
- o This revision--
- o Adds U.S. Army Reserve Command responsibilities and modifies policies for USAR maintenance accordingly.
- o Adds priority designation table for assignment of urgency of need designators (para 3-2 and table 3-1).
- o Revises policy for specialized repair activities (para 3-13).
- o Adds policy on quality control of maintenance contracts (para 4-22).
- o Revises policy for sample data collection (para 4-38).
- o Revises policy for battlefield damage assessment and repair (para 4-40).
- o Adds policy for tool improvement program suggestions (para 4-47).
- o Revises policy on watercraft (para 5-5).
- o Changes policy on maintenance training aircraft (para 5-29).
- o Revises policy on non-tactical vehicles (para 5-40).
- o Changes definition of workday for manhour utilization (app C).

Effective 1 August 1996

Maintenance of Supplies and Equipment

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By Order of the Secretary of the Army:



Togo D. West, Jr.
Secretary of the Army

History. This publication was originally printed on 1 August 1994 and was authenticated by Gordon R. Sullivan, Chief of Staff, and Milton H. Hamilton, Administrative Assistant to the Secretary of the Army. This electronic edition publishes the basic 1994 edition and incorporates Change 1, published on 1 July 1996. Change 1 was authenticated by Togo D. West, Jr., Secretary of the Army.

Summary. This regulation implements the policies of Department of Defense Directive 4151.18 as it applies to Army materiel maintenance. It covers Department of the Army policy for general maintenance operations, commodity oriented

maintenance operations, maintenance management systems, interservice and contract maintenance support, and maintenance floats.

Applicability. This regulation applies to the Active Army, the Army National Guard, and the U.S. Army Reserve. This regulation is applicable during full mobilization.

Proponent and exception authority. The proponent of this regulation is the Deputy Chief of Staff for Logistics (DCSLOG). The DCSLOG has the authority to approve exceptions to this regulation that are consistent with controlling law and regulation. The DCSLOG may delegate this approval authority, in writing, to a division chief within the proponent agency in the grade of colonel or the civilian equivalent.

Army management control process. This regulation is subject to the requirements of AR 11-2. It contains internal control provisions. Checklists for conducting internal control reviews are included in Appendix E through Appendix M.

Supplementation. Supplementation of this regulation and establishment of command or local forms are prohibited without prior approval from HQDA (DALO-SMM), WASH DC 20310-0546.

Interim changes. Interim changes to this regulation are not official unless they are authenticated by the Administrative Assistant to the Secretary of the Army. Users will destroy interim changes on their expiration dates unless sooner superseded or rescinded.

Suggested Improvements. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to ATTN: LOEA-OS, U.S. Army Logistics Evaluation Agency, 54 M Ave, Suite 4, New Cumberland, PA 17070-5007.

Distribution. Distribution of this publication is made in accordance with the requirements of DA Form 12-09-E, block number 2561, intended for command levels A for Active Army, Army National Guard, and U.S. Army Reserve.

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Chapter 1

Introduction

1-1. Purpose

This regulation establishes policies and assigns responsibilities for the maintenance of Army materiel. It provides and defines requirements for performance and management of the materiel maintenance function. It concerns unit, direct support (DS), and general support (GS) levels of the Army maintenance system, and Army-wide program and commodity unique maintenance. This regulation also applies to the following:

- a. The maintenance of all materiel owned or supported by the U.S. Army except the following:
 - (1) Materiel purchased with nonappropriated funds, special intelligence property administered per AR 381-143, real property, materiel used by civil works activities of the Corps of Engineers, or foreign materiel used for training.
 - (2) Government furnished materiel (GFM) used at Government-owned, contractor-operated (GOCO) plants or used by contractors performing commercial activities (CA) contracts. GFM is governed by the Federal Acquisition Regulation (FAR).
 - (3) Leased/rented materiel unless the lease/rental agreement dictates otherwise.
- b. Those aspects of combat and materiel development that impact upon the materiel maintenance function.
- c. Materiel maintenance as implemented in AR 795-3 and the AR 12-series publications.

1-2. References

Required and related publications and referenced forms are listed in appendix A.

1-3. Explanation of abbreviations and terms

Abbreviations and special terms used in this regulation are explained in the glossary.

1-4. Exceptions

A request for exception to any provision of this regulation will be submitted through command channels to HQDA (DALO-SMM), WASH, DC 20310-0546, with information copy to Commander, U.S. Army Logistics Evaluation Agency, ATTN: LOEA-OS, New Cumberland, PA 17070-5007, unless otherwise specified in this regulation. Request for exceptions to policy specific to the Army National Guard (ARNG) will be submitted to the State Adjutant General, then through the Chief, National Guard Bureau (CNGB), to HQDA, DALO-SMM, with copy furnished to U.S. Army Logistics Evaluation Agency (USALEA), LOEA-OS. Request for exception will include—

- a. A recommended alternate course of action.
- b. An analysis which shows that the alternate course of action is the best solution under the circumstances.

Chapter 2

Responsibilities

2-1. Assistant Secretary of the Army (Financial Management (ASA(FM)))

The ASA(FM) will develop and prescribe financial policy and procedures for the use of appropriated and nonappropriated maintenance funds.

2-2. Deputy Chief of Staff for Logistics (DCSLOG)

The DCSLOG will—

- a. Perform general staff supervision of maintenance activities, including those of the Active and Reserve components.
- b. Manage the Department of Defense (DOD) interservice, interdepartmental, and interagency maintenance support programs within the Army.
- c. Ensure materiel readiness and sustainability of the U.S. Army.
- d. Formulate concepts, policies, plans, and program guidance for the following materiel maintenance programs:
 - (1) The Army Maintenance Master Plan (TAMMP) (para 3-6).
 - (2) Specialized repair activity (SRA) (para 3-13).
 - (3) Maintenance assistance and instruction team (MAIT) (para 4-18).
 - (4) Sample data collection (SDC) (para 4-38). The DCSLOG will provide general staff supervision and approval for all policies pertaining to the program, approve items for mandatory SDC status, and appoint the USAMC Logistics Support Activity (LOGSA) as the executive agent for SDC.
 - (5) Maintenance float procedures (para 4-39).
- e. Develop Army policy for integrated logistics support (ILS).

- f.* Approve the establishment and discontinuance of equipment maintenance missions (EMMs), satellite materiel maintenance activities (SMMAs), and installation materiel maintenance activities (IMMAs).
- g.* Develop the basic functional guidance for transition to automated logistics systems in support of maintenance.
- h.* Provide final approval for funding of interservice support agreements (ISA) that exceed programmed support (para 4–32).
- i.* Develop the Maintenance Assistance and Instruction Team (MAIT) Program and approve or disapprove requests for program changes or deviation. Specific responsibilities pertaining to the MAIT Program are in paragraph 4–18.
- j.* Publish the DA–approved maintenance float support list as of 1 October each year and approve float factors. Additional responsibilities are listed in paragraph 4–39 *d*.
- k.* Represent the Department of the Army’s tire retread program in those matters involving policy and planning that also concern DOD or the Departments of the Navy and Air Force.

2–3. Commander, U.S. Army Logistics Evaluation Agency (USALEA)

The Commander, USALEA, as the executive agent for the DCSLOG, and with the DCSLOG, will—

- a.* Develop the policy for the programs listed in paragraph 2–2 *d*.
- b.* Act as the independent evaluator for DCSLOG to perform evaluations of approved SRA actions, as well as recommendations for SRA request disapproval that are forwarded from Headquarters, U.S. Army Materiel Command.
- c.* Evaluate the yearly SRA production data reports and provide findings to HQDA (DALO–SMM).

2–4. Deputy Chief of Staff for Intelligence (DCSINT)

The DCSINT will develop policies and procedures related to materiel maintenance of intelligence–unique materiel (AR 381–143).

2–5. Deputy Chief of Staff for Operations and Plans (DCSOPS)

The DCSOPS will—

- a.* Approve the Army force structure requirements and authorizations for maintenance support.
- b.* Approve requirements and priorities for associated support items of equipment (ASIOE) (AR 71–2).
- c.* Direct the coordination and utilization of operational test results in the development of force structure, training, and materiel requirements and authorizations.
- d.* Develop Department of the Army (DA) policy and guidance on maintenance training.

2–6. Deputy Chief of Staff for Personnel (DCSPER)

The DCSPER will develop plans, policies, and programs for the management of military and civilian maintenance personnel.

2–7. Chief of Engineers (COE)

The COE will—

- a.* Provide coordination and management for developing policies, plans, programs, and budgetary requirements pertaining to the performance of maintenance on materiel used to accomplish the worldwide facilities engineering (FE) mission.
- b.* Assist the materiel developer and serviced major Army commands (MACOMs) in identifying requirements for, and the design and construction of, maintenance facilities.

2–8. The Surgeon General (TSG)

The TSG will—

- a.* Develop concepts, policy, doctrine, and plans for the maintenance of medical materiel.
- b.* Develop medical force structures, organizations, and capabilities to provide required maintenance services for medical materiel.
- c.* Develop, manage, and monitor medical materiel and maintenance programs for the Army.

2–9. Chief, Army Reserve (CAR)

The CAR will provide overall coordination and administration for developing materiel maintenance plans, programs, and budgetary requirements pertaining to the U.S. Army Reserve (USAR).

2–10. Chief, National Guard Bureau (CNGB)

The CNGB will provide overall coordination and administration for developing materiel maintenance policies, plans, programs, and budgetary requirements pertaining to the ARNG.

2–11. Commanding General, U.S. Army Information Systems Command (CG, USAISC)

The CG, USAISC will—

a. Maintain Army base operations (BASOPS) communications–electronics (CE) equipment, other assigned automation, communication, printing, audio–visual and records management equipment, and the Army portion of the Defense Communication System.

b. Maintain information systems at U.S. Army Intelligence and Security Command (INSCOM) sites.

2–12. Commander, Forces Command (FORSCOM)

Commander FORSCOM in support of the USAR will—

a. Conduct a continuing analysis and evaluation of the USAR materiel maintenance program to ensure that the objectives of the program are attained by all subordinate commands.

b. Authorize resources to those tables of distribution and allowances (TDA) maintenance activities established by the U.S. Army Reserve Command (USARC) in the continental United States (CONUS) to support the USAR materiel maintenance program. DA Pam 570–560 will be used as a guide for determining manpower requirements of the maintenance activities.

2–13. Commanding General, U.S. Army Intelligence and Security Command (CG, INSCOM)

The CG, INSCOM will operate and maintain assigned command unique intelligence materiel through GS level.

2–14. Commanding General, U.S. Army Materiel Command (CG, USAMC)

The CG, USAMC will—

a. Develop Army depot level maintenance concepts and support systems, with participation by HQDA (DALO–SMM), TRADOC, USAISC, and INSCOM.

b. Manage the depot maintenance system.

c. Establish and operate logistics assistance offices (LAO).

d. Ensure that spares and repair parts are available in sufficient quantities to support materiel throughout its life cycle.

e. Develop and operate a standard centralized maintenance management information system (MIS) to provide historical maintenance data in support of Army materiel development.

f. Manage the Army Oil Analysis Program (AOAP) (para 4–36).

g. Manage test, measurement, and diagnostic equipment (TMDE) functions as the DA executive agent.

h. Manage and execute all responsibilities for worldwide calibration and repair of common and selected special purpose TMDE.

i. Manage the Army Warranty Program.

j. Manage the Army Chemical Agent Resistant Coating (CARC) and Camouflage Pattern Painting (CPP) Programs (para 4–41).

k. Manage and staff requirements for the maintenance allocation chart (MAC) (para 3–8).

l. Evaluate initial requests for specialized repair activities (SRA) (para 3–13).

m. Manage the Logistics Assistance Program (LAP) (para 4–17).

n. Program, budget, and fund DA–approved SDC projects.

o. Manage the depot repair and return program. The responsibilities for this program are in paragraph 4–44 *c.*

p. Establish a worldwide program for management of aircraft and vehicle tires including retreading.

2–15. Commanding General, U.S. Army Training and Doctrine Command (CG, TRADOC)

The CG, TRADOC will—

a. Develop Army maintenance concepts and doctrine for unit, DS, and GS levels of the Army Maintenance System in coordination with materiel developers and HQDA (DALO–SMM).

b. Develop automated systems to support the Army maintenance system.

c. Evaluate fielded systems to update maintenance training for unit, DS, and GS levels of maintenance.

d. Ensure that newly identified maintenance tasks are included in soldier's manuals and skill qualification tests.

e. Ensure that training materials are developed to provide the training required to support maintenance military occupational specialties (MOSs).

f. Ensure battlefield damage assessment and repair (BDAR) techniques are included in maintenance training courses.

g. Ensure operator and leader level PMCS instruction is included in all resident training courses.

h. Develop and incorporate AOAP instructions for appropriate programs of instruction (para 4–36).

i. Develop concepts and doctrine for employing depot level repair in a theater of operations.

2–16. Commanding generals (CGs)

The CG, TRADOC and CG, U.S. Army Pacific Command (USARPAC) in support of the USAR will ensure that

support installations provide maintenance support to the USAR within the geographical boundaries established by AR 5-9.

2-17. Major Army commanders

Major Army commanders will—

- a. Emphasize the importance of maintenance to the overall combat readiness of forces. This will include ensuring that commanders at all levels are held accountable for the conduct of maintenance operations and the reporting thereof to higher headquarters. Basic to this emphasis is that maintenance is a command responsibility.
- b. Ensure evaluation of maintenance is included in the command inspection program.
- c. Ensure that subordinate commanders comply with the policies in this regulation. One copy of any implementing instructions will be sent to Commander, USALEA, ATTN: LOEA-OS, New Cumberland, PA 17070-5007.
- d. Ensure that maintenance operations at all levels within their command are properly supervised.
- e. Establish and supervise training programs for equipment operators/crews and maintenance personnel in the conduct of maintenance operations.
- f. Provide timely and accurate cost, readiness, and maintenance data to management systems.
- g. Acquire and maintain a self-sufficient military capability and capacity for unit, DS, and GS maintenance in support of combat, combat support, and combat service support elements.
- h. Program funds for unit, DS, and GS levels of maintenance; and rank any unfinanced requirements.
- i. Ensure that maintenance is performed at the lowest level possible according to MACs. This process must preclude TDA maintenance activities from absorbing maintenance workload that should be performed at MTOE unit, DS, and GS levels of maintenance.
- j. Minimize the number of TDA maintenance operations to reduce resource requirements without adversely impacting operational and contingency requirements. Ensure that there is only one IMMA on an installation. Installation commanders may consolidate Director of Logistics (DOL) and Director of Engineering and Housing (DEH) (or Director of Public Works (DPW)), maintenance operations when cost-effective.
- k. Evaluate all available methods of support before forwarding requests from subordinate commanders for the establishment of IMMAs, SMMAs, and EMMs. Examples of support methods are the IMMA Memorandum of Understanding or Agreement, Interservice or Intraservice Support Agreement (ISSA), or contract. Submit requests to establish and discontinue IMMAs, SMMAs, and EMMs to HQDA, Office of the Deputy Chief of Staff, Logistics, ATTN: DALO-SMM, WASH DC, 22310-0546 per DA Pam 750-13.
- l. Comply with materiel maintenance standards and maintenance-related logistical performance and readiness standards.
- m. Coordinate all requirements for TMDE procurement with the U.S. Army Central TMDE Activity (AR 750-43).
- n. Establish a warranty control office/officer to implement the Army Warranty Program per AR 700-139.
- o. Comply with State and local regulations governing the inspection and maintenance requirements for prevention of pollution from mobile equipment (AR 200-1).
- p. Provide air traffic control materiel support.
- q. Establish an effective corrosion prevention and control program for assigned equipment per AR 750-59.
- r. Determine if reimbursement for fabrication services of DS, GS, or installation maintenance activities is authorized.
- s. Carry out quality programs under the provisions of AR 70-1 and AR 70-2 for assigned maintenance and calibration operations.
- t. Designate points of contact (POC) for the TAMMP, SRA, MAIT, SDC, and maintenance float programs.
- u. Assist executive agent and AMC major subordinate commands (MSC) as required in establishing and conducting SDC projects that are implemented in the MACOM.

2-18. Commander, U.S. Army Reserve Command

The USARC commander will provide command supervision of administrative, logistical, and technical assistance to USAR commands in support of Army materiel maintenance programs.

2-19. Installation commanders

Installation commanders will—

- a. Provide DS, GS, and aviation intermediate maintenance (AVIM) as required for USAR units and maintenance activities located in the installation support area; in-house and contractor maintenance will be provided as stipulated in AR 5-9 and this regulation.
- b. Provide logistical support to USAR units during annual training (AT), as required.
- c. Maintain an effective liaison program to the supported Area Maintenance Support Activity (AMSA), Equipment Concentration Site (ECS), and Aviation Support Facility (ASF) within the logistical area of responsibility.

d. Provide for backup equipment recovery support from commercial sources through the efforts of the supporting installation. Costs will be provided through Operation and Maintenance, Army Reserve (OMAR) program elements.

2-20. Major U.S. Army Reserve Command (MUSARC) commanders

MUSARC commanders will—

- a.* Supervise the maintenance functions of subordinate maintenance activities and provide maintenance support for Army Reserve units and activities within their assigned areas.
- b.* Ensure that USAR units under their command perform maximum maintenance within authorization and capabilities on issued or loaned equipment.
- c.* Ensure that USAR DS, GS, and AVIM maintenance units are assigned support missions within existing capabilities and resources.
- d.* Provide assistance to USAR units during AT, inactive duty training (IDT), or other scheduled training assemblies.
- e.* Provide backup road service within capabilities of subordinate units/maintenance activities to USAR units in transit within their assigned area of responsibility.
- f.* Coordinate with Active Component (AC) support facilities to mutually develop maintenance support and resource requirements.
- g.* Establish procedures to—
 - (1) Monitor and control the performance of maintenance activities.
 - (2) Maximize the utilization of USAR TOE maintenance units to perform DS, GS, and AVIM maintenance consistent with their modification table of organization and equipment (MTOE) mission, training status, and capabilities.
- h.* Be responsible for the maintenance support of USAR equipment within a prescribed area; develop and publish a USAR equipment maintenance support plan.
- i.* Ensure that complete unit maintenance support (to include scheduling and maintenance of equipment records) is provided to units that do not have a TOE unit maintenance capability. This does not include operator or crew maintenance unless adequately justified as an exception by the unit commander on DA Form 2407 (Maintenance Request).
- j.* Ensure that an effective maintenance training program is developed for each MTOE unit having organic unit or higher level maintenance capability.
- k.* Ensure that maintenance activities provide hands-on repair assistance during periods of IDT, when requested by supported units. Administrative requirements such as prescribed load list (PLL) and technical assistance support will be provided by MAIT personnel.
- l.* Initiate a program to validate DA Form 2406 (Materiel Condition Status Report) through comparison with preventive maintenance checks and services (PMCS) completed by unit personnel.

2-21. U.S. Army Reserve unit commanders

USAR unit commanders will—

- a.* Schedule adequate training time for the performance of preventive maintenance on assigned equipment. This will ensure the involvement of personnel available for training in, and the performance of, PMCS during each daily scheduled training assembly. Specific time will be included in the unit training schedule.
- b.* Develop an operator training program and assign a licensed operator to each item of equipment.
- c.* Schedule and supervise maintenance training.
- d.* Be responsible for the performance of all authorized maintenance on borrowed equipment. A unit's rating for AT will reflect any failure to complete unit maintenance before return of borrowed equipment.

2-22. State adjutants general

The State adjutants general will—

- a.* Direct and manage unit, DS, and GS maintenance operations applicable to all Federal supplies and equipment issued to ARNG units and activities within the State.
- b.* Establish procedures to provide for the timely maintenance and/or servicing of equipment.
- c.* Establish a MAIT.
- d.* Ensure that commanders at company and higher levels appoint logistics readiness officers.
- e.* Evacuate equipment and materiel requiring depot maintenance as directed by the CNGB.
- f.* Establish unit maintenance facilities to provide support for home station equipment.
- g.* Designate specific ARNG unit(s) to use and support an approved unit training equipment site (UTES) operations. This will include adjusting operating costs within and between using unit(s) for related maintenance and training.
- h.* Designate type and quantity of home station equipment to be located at the UTES.
- i.* Establish a reparables exchange activity in conjunction with the U.S. Property and Fiscal Officer (USPFO).

2-23. Surface maintenance manager (SMM)

The SMM is a member of the State adjutant general's staff and will—

- a.* Plan, execute, and direct the surface maintenance human resources program.
- b.* Plan, develop, and manage in-State maintenance training; determine and coordinate out-of-state maintenance training.
- c.* Implement and administer the safety, hazardous waste, and industrial hygiene programs for all surface maintenance facilities.
- d.* Serve as the principal State adviser to the facilities management office on surface maintenance facilities construction.
- e.* Analyze, coordinate, and manage on-hand equipment readiness for the State.
- f.* Provide technical supervision to all surface maintenance activities and exercise operational and administrative control over combined support maintenance shops (CSMCs), mobilization and training equipment sites (MATESs), UTESs, and organizational maintenance shops (OMSs).
- g.* Serve as the program manager for surface maintenance funds.
- h.* Designate, in writing, an individual to assume temporary duty as acting CSMS, MATES, OMS, or UTES foreman during temporary absence of the appointed shop foreman.
- i.* Manage the State's nontactical vehicle fleet.
- j.* Manage the SMM office, providing control and direction for all matters relating to office administration.

2-24. State Army aviation officer (SAAO)

The SAAO is a member of the State adjutant general's staff and will—

- a.* Implement and administer the State aviation logistics programs.
- b.* Analyze, coordinate, and manage the operational readiness of aviation assets.
- c.* Ensure the aviation logistics programs are in accordance with applicable materiel and maintenance regulatory requirements.

2-25. Army aviation support facility (AASF)

The AASF commander is a member of the SAAO's staff and will—

- a.* Supervise implementation of aviation logistics programs.
- b.* Maintain ARNG aviation assets at the DA readiness goals listed in AR 700-138, as a minimum.
- c.* Ensure compliance with safety of flight requirements and aircraft modifications.

2-26. Aviation maintenance officer (AVN MO)

The AVN MO is a member of the AASF commander's staff and will—

- a.* Administer the ARNG aviation maintenance program.
- b.* Supervise ARNG maintenance and materiel technical personnel.
- c.* Ensure logistics regulatory requirements are implemented and followed through the complete aviation cycle.
- d.* Maintain ARNG aviation assets in the highest state of readiness.
- e.* Report compliance with safety-of-flight requirements and aircraft modifications.
- f.* Report deficiencies in quality, materiel, or maintenance per DA Pam 738-751.

2-27. Commanders and supervisors responsible to the State adjutant general

Commanders and supervisors responsible to the State adjutant general will—

- a.* Train personnel designated as operators and crew members to properly operate and perform PMCS on their assigned equipment.
- b.* Assign maintenance responsibilities for unit equipment to specific individuals.
- c.* Schedule maintenance time and give equal emphasis to preventive maintenance training.
- d.* Require compliance with prescribed preventive maintenance procedures.
- e.* Require that all equipment be maintained to the maintenance standard outlined in paragraph 3-1 *a.*
- f.* Establish a program to prevent abuse of equipment.
- g.* Require that all before, during, and after operations checks be accomplished each time the equipment is operated or used.
- h.* Submit DA Form 2404 (Equipment Inspection and Maintenance Worksheet) or DA Form 2407 to the supporting maintenance facility for backup maintenance support beyond the unit's capability.
- i.* Maintain records applicable to hand receipt, operation, maintenance, modification materiel readiness reports, and transfer of equipment as prescribed in appropriate publications.

j. Submit requests for replacement of basic issue items (BII), component of end item (COEI), initial troop installed and authorized (ITIA) items, and repair parts for equipment under their control.

2-28. Commanders at all levels

Commanders at all levels will—

- a.* Emphasize the importance of maintenance and ensure that subordinates are held accountable for the conduct of maintenance operations. Maintenance is a command responsibility.
- b.* Provide leadership, technical supervision, and management control of materiel maintenance programs of subordinate commands and activities.
- c.* Emphasize the conduct and supervision of PMCS performed at the unit level. Materiel will be maintained at the maintenance standard specified in paragraph 3-1 *a.*
- d.* Develop and sustain a high degree of maintenance discipline within their commands. This includes management of repair parts per AR 710-2.
- e.* Establish, maintain, and conduct training of operators and crews to properly use and maintain equipment.
- f.* Establish, maintain, and conduct training of leaders at all levels to properly supervise maintenance operations and to motivate subordinates to properly and safely use and maintain equipment.
- g.* Exercise management controls sufficient to ensure prudent and efficient utilization of all resources (people, money, materiel, and time) required to perform assigned maintenance missions.
- h.* Conduct inspections and staff visits to determine the adequacy of command maintenance operations. Document all faults to ensure that corrective actions are taken and to ensure the accuracy of readiness reports.
- i.* Provide materiel maintenance support to all assigned units and activities.
- j.* Recommend improvements to the Army maintenance system.
- k.* Comply with the provisions of AR 750-43 for all TMDE used in support of maintenance operations.
- l.* Ensure that the submissions of quality deficiency reports (QDRs) and equipment improvement recommendations (EIRs) are accomplished per DA Pam 738-750 (ground support and watercraft) or DA Pam 738-751 (aircraft/aviation equipment).
- m.* Encourage the establishment of an aggressive awards program for operators and maintainers.
- n.* Implement an effective quality program per AR 70-1 and AR 70-2. Quality programs will be defined, quantified, specified, measured and assessed.
- o.* Ensure that all unit level PMCS as required by the -20 level TMs to include all DS level services are scheduled and performed.
- p.* Ensure prompt compliance with requirements dictated by safety-of-use messages.
- q.* Ensure that sufficient numbers of personnel are trained in various BDAR skills so that combat resilience requirements can be met in wartime operations.
- r.* Support the SDC program, when implemented, by providing proponent agency contractor personnel with reasonable access to equipment and data relevant to the SDC project.

2-29. Combat developers (CBTDEVs)

Combat developers as identified in AR 700-127 will—

- a.* Include management and performance of the materiel maintenance function in the development of concept, doctrine, materiel requirements, organizations, and management information systems.
- b.* Determine the maintenance impact of new materiel or concepts.
- c.* Assist in planning for logistics demonstrations and maintenance tests and conduct analysis of results.
- d.* Resolve critical issues related to reliability, availability, maintainability, and supportability.
- e.* Determine requirements for, and develop, the documentation for training devices.
- f.* Develop techniques and determine skill requirements for BDAR.
- g.* Coordinate with materiel developers in including materiel maintenance considerations in requirements documents.

2-30. Materiel developers (MATDEVs)

Materiel developers as identified in AR 700-127 will—

- a.* Coordinate with combat developers the materiel maintenance considerations to be included in requirements documents.
- b.* Ensure that the materiel fielding plan meets the requirements of the Army maintenance system.
- c.* Ensure that reliability, availability, and maintainability is included in design parameters and demonstrated during operational testing.
- d.* Ensure that reliability centered maintenance (RCM) is a basic precept in developing the maintenance concept.
- e.* Ensure that trained personnel, TMDE, facilities, support equipment, repair parts, and publications are available when the system is delivered to the user.

- f.* Participate in planning and conducting logistics demonstrations and operational maintenance testing.
- g.* Establish and monitor modification work order (MWO) programs.
- h.* Develop BDAR techniques, procedures, and related tool and materiel requirements. The developers will also ensure BDAR concepts are incorporated into new materiel development.
- i.* Develop factors for determining ORF requirements. These factors will be submitted to HQDA (DALO-SMM) for approval.
- j.* Include requirements for compliance with Federal environmental quality standards for mobile equipment, beginning with the concept formulation process (AR 200-1).
- k.* Emphasize prognostics and diagnostics in the design, development, and improvement of equipment.
- l.* Ensure that data collected from all levels of maintenance is analyzed and used for prognostic purposes.
- m.* Ensure that equipment is designed with the need for a minimum number of common and special tools.
- n.* Support the SDC program as required in para 4-38.

Chapter 3

Maintenance Policies and Structure

Section I

General Policies

3-1. General maintenance policies

a. The Army has one maintenance standard. The maintenance standard is based on TM 10 and 20-series, PMCS. This standard applies to all equipment except equipment utilized as training aids and frequently disassembled and assembled for instructional purposes. This equipment will be maintained as training aids per paragraph 5-44. The maintenance standard is the condition of the equipment when—

- (1) The equipment is fully mission capable.
- (2) All faults are identified following prescribed intervals using the “items to be checked” column of the applicable TM 10 and 20-series PMCS table. Aviation faults are determined by using the aircraft preventive maintenance inspection system (PMIS) per TM 1-1500-328-23 and—
 - (a)* Corrective actions that are authorized to be accomplished at unit level and for which the required parts are available are completed.
 - (b)* Parts required to complete the corrective actions but which are not available are on valid funded requests.
 - (c)* Corrective actions that are authorized to be accomplished at a maintenance level above the unit are on a valid DS maintenance request.
- (3) Equipment services are performed within the scheduled service interval.
- (4) All urgent and limited urgent MWOs are applied. Additionally, one-time safety-of-use messages and emergency safety-of-flight messages are applied to aircraft.
- (5) All authorized BII and COEI are present and serviceable or on a valid funded request.
 - b.* Proper use, care, handling, and conservation of materiel per applicable TMs or commercial manuals is mandatory.
 - c.* A commissioned officer, warrant officer, or civilian equivalent qualified in maintenance will be appointed in writing at each level of command to provide staff supervision of materiel maintenance within the command. In MTOE units where there is only one commissioned or warrant officer, a qualified non-commissioned officer may be appointed.
 - d.* Maintenance standing operating procedures (SOPs) will be established and maintained by all Army organizations and activities performing maintenance.
 - e.* Maintenance support programs will be structured to meet materiel system readiness objectives as defined by AR 700-138.
 - f.* Materiel maintenance management will be directed toward a weapon system and/or materiel end item.
 - g.* The top design priorities in the development of new weapon and equipment end items are modular design and discard at failure instead of repair. These design features will minimize repair time and the need for additional special tools by allowing for simple fault diagnosis and component replacement.
 - h.* Repair on site, whenever possible, using the lowest level maintenance activity that has the capability and authority to perform the work. Repair forward will minimize repair times by minimizing evacuation of materiel.
 - i.* Maintenance will be performed by military personnel in areas forward of the corps rear boundary. Contractors/contracted maintenance will not normally be allowed for unit or DS levels of maintenance. It is Army policy that equipment issued to troops in TOE units will be maintained by soldiers at unit and DS levels. Exceptions to this policy will be approved by HQDA. Contractor maintenance personnel will not be permanently stationed forward of the corps rear boundary. Contractor maintenance personnel may travel forward of the corps rear boundary on a case-by-case

basis as individual equipment failures occur to provide temporary on-site maintenance. Behind the corps rear boundary, in addition to military personnel, the use of civilian maintenance personnel (contract, TDA, local nationals, and so forth) may be acceptable as a prudent risk.

j. Limits on available time to repair at each level of maintenance drives the evacuation policy. Repair time guidelines contained in doctrinal publications must be used with caution. Repair/evacuation times, in turn, drive the placement of each task in the MAC and eventually the requirements for personnel, equipment, and overall force structure.

k. MACOMs have authority to authorize fabrication of repair parts and components that cannot be provided by the requester's required delivery date (RDD). The approving MACOM will provide funds for this fabrication. This excludes components critical to flight safety.

l. Modification or alteration of Army materiel is forbidden, except as authorized by the Interim Operation Instructions (IOI) for Army Materiel Change Management (MCM).

m. HQDA (DALO-SM) will coordinate with the Office of the Secretary of Defense (OSD) and other military departments and services to develop common maintenance terminology and data for use in maintenance management documents.

n. The serial number assigned to an end item or component will not be changed, regardless of changes in configuration, without written approval by the item manager.

o. Line replacement units (LRUs) and printed circuit boards (PCBs) will be identified when removed from major end items or components of the end item. Procedures are in DA Pam 738-750 and DA Pam 738-751.

p. TMDE will be calibrated per DA TMDE calibration and repair support program. See AR 750-43 for detailed guidance.

q. Quality control must be fully integrated into maintenance operations to ensure—

(1) The identification of equipment faults.

(2) Compliance with repair procedures and equipment standards contained in the TMs and commercial publications.

r. Equipment that accumulates less than a specified number of miles/kilometers or hours in a one year period may have reduced services applied. Criteria and management of low usage equipment are defined in DA Pam 738-750.

s. The maintenance of supplies and equipment issued to USAR units and activities will be achieved by providing for—

(1) Maximum utilization of units in performance of their MTOE authorized missions.

(2) The use of AMSAs, the maintenance branch of the ECS when in the roll of support maintenance (unit/limited DS), and the ASF when in the roll of limited AVIM. This expanded mission will be authorized by the USARC (ATTN: AFRC-LGS-M) or by the CG, USARPAC, and is based upon available manpower, facilities, and/or resources. Parent MUSARCs are held accountable for excessive backlog (not to exceed 21 days of unit maintenance). Priority will be given to unit level maintenance when backlog exceeds 21 days. EMM will be approved by DALO-SMM and included in appendix B.

(3) Establishment by USARC of CONUS USAR maintenance support policies. Applicable commanders in chief (CINC) of OCONUS USARC units will establish maintenance support policies.

(4) Support agreements with other DOD activities and Government agencies.

3-2. Application of urgency of need designator (UND) to maintenance

The determination of the appropriate priority based on the UND will be in accordance with table 3-1.

a. UND A is used in assignment of maintenance priorities when—

(1) The unit/activity is unable to perform its assigned operational mission.

(2) Materiel to be repaired is MTOE equipment that is reportable under AR 220-1, and TDA equipment that is reportable under AR 700-138 and AR 18-25.

(3) The unit/activity is unable to perform assigned training missions.

(4) Repair of essential facilities of an industrial/production activity manufacturing, modifying, or maintaining mission-essential materiel is required.

(5) The materiel is an intensively managed or critical item.

b. UND B is used in assignment of maintenance priorities for repair of materiel when—

(1) The unit/activity's ability to perform its assigned operational mission is impaired. Without such materiel, the unit/activity may temporarily accomplish assigned missions, but at reduced effectiveness and efficiency below the level of acceptable readiness.

(2) The materiel is ERC-A or ERC-B materiel and is not DA Form 2406 (or DA Form 3266-1 (Army Missile Materiel Readiness Report) or DA Form 1352 (Army Aircraft Inventory Status and Flying Time)) reportable.

(3) USAR TDA maintenance activities are authorized to upgrade the UND when a not mission capable (NMC) deficiency is found. Only NMC parts are requisitioned when upgraded.

c. UND C is used in assignment of maintenance priorities for all other materiel not listed above.

d. Maintenance units/activities manage repair of materiel by maintenance priority designator and analysis of impact

on unit readiness. The usual sequence of work will be to repair the oldest job within a priority first. However, analysis of unit materiel readiness may dictate re-sequencing of maintenance work. For example, two units of the same force/activity designator (FAD) each have a not mission capable tank on the same maintenance priority. One tank has been not mission capable for 30 days, but is not reducing the C-rating of the unit; the other tank has been not mission capable for 5 days, but is reducing the C-rating, priority should be given to the second tank.

e. As a general rule, repair parts requisition designators perpetuate the maintenance priority designator assigned on DA Form 2407. AR 725-50 describes in detail supply priority designators.

3-3. Maintenance of medical materiel

Maintenance policies, programs, and procedures unique to medical materiel are contained in AR 40-61, chapter 6.

3-4. Maintenance of consolidated express (CONEX) and military-owned demountable containers (MILVAN)

CONEX/MILVANs are maintained within the capability of the using unit or activity. Additional maintenance policies are contained in AR 750-2.

3-5. Maintenance of facilities engineering equipment

Maintenance policies and procedures unique to those non-type classified and nonstandard items of equipment utilized by DEH or DPW personnel to accomplish their installation's facilities engineering mission are contained in AR 420-18.

Section II Rescinded

3-6. Rescinded

3-7. Rescinded

Section III The Army Maintenance Structure

3-8. The Army maintenance system

a. The Army maintenance system, less aircraft, consists of four levels. They are unit, DS, GS, and depot levels. Aircraft maintenance consists of three levels: unit (AVUM), intermediate (AVIM) and depot.

b. The MAC is the primary tool for assigning tasks within the levels of the Army maintenance system. All new and revised MACs are coordinated with the proponent (TRADOC school), and submitted to HQDA (DALO-SMM) for final approval prior to publication. When directed by HQDA (DALO-SMM), AMC staffs the MAC with user MACOMs for comment.

3-9. Unit level maintenance

a. Unit maintenance is the first and most critical level of the Army maintenance system. It is the foundation of the maintenance system and requires continuous emphasis by all commanders. Commanders must establish a command climate that ensures that assigned equipment is maintained to the maintenance standard defined in paragraph 3-1 *a* above. Commanders are responsible for providing resources, assigning responsibility, and training their soldiers to achieve this standard.

b. The cornerstone of unit maintenance is the operator/crew performing PMCS from the applicable TM 10-series. The before and during PMCS checks concentrate on ensuring equipment is fully mission capable (FMC). Faults detected during before operations checks that make the equipment not FMC or violate a safety directive must be corrected before the mission. Faults detected during the mission affecting FMC must be corrected during the mission. Faults detected before or during the mission not affecting FMC may be corrected, if time permits, or recorded/reported for correction after the mission. After operations checks detect faults resulting from the mission and ensure the identification and correction of faults to maintain the equipment to the maintenance standard.

c. Unit mechanics will use the TM 10- and 20-series to identify and correct faults. The TM 20-series PMCS tables are used to perform scheduled PMCS services that sustain and extend the combat capable time of the equipment.

d. Maintenance operations normally assigned to unit maintenance include the following:

- (1) Performance of PMCS.
- (2) Inspections by sight and touch of external and other easily accessible components per the TM 10- and 20-series.
- (3) Lubrication, cleaning, preserving (to include spot painting), tightening, replacement, and minor adjustments authorized by the MAC.
- (4) Diagnosis and fault isolation as authorized by the MAC.

- (5) Replacement of unserviceable parts, modules, and assemblies as authorized by the MAC.
 - (6) Requisition, receipt, storage, and issue of repair parts.
 - (7) Verification of faults and level of repair of unserviceable materiel prior to evacuation.
 - (8) Evacuation to the appropriate maintenance support activity of unserviceable reparables beyond the MAC authorization to correct/repair.
 - (9) Recovery or transportation of equipment to and from the supporting maintenance activity.
 - (10) Accomplishment of all tasks required by the AOAP.
 - (11) Materiel readiness reporting per AR 700-138.
- e.* Performance of unit level maintenance will be documented using the forms and records as described in DA Pam 738-750 and DA Pam 738-751. This information is used to assist commanders in establishing, monitoring, and evaluating their maintenance program. In addition to the regulatory guidance in this publication, doctrinal and technical guidance for unit level maintenance operations is found in DA Pam 750-35 and DA Pam 750-1.
- f.* OMSs in the ARNG will provide unit maintenance that is beyond the capabilities of owning units. Owning units will perform unit maintenance, to include scheduled services, within the constraints imposed by IDT and AT periods. Unit commanders will advise supporting OMS foremen of unit maintenance requirements that are beyond their unit's capability. OMSs will perform the following maintenance functions for surface equipment:
- (1) Maintain liaison with supported unit commanders.
 - (2) Schedule maintenance services, when feasible, to coincide with quarterly and semiannual services.
 - (3) Service all equipment issued under warranty as specified in the manufacturer's service manual or materiel fielding plan.
 - (4) Maintain authorized repair parts and supplies.
 - (5) Furnish contact teams to perform unit maintenance and inspection, to include unit equipment located at high concentration training sites (HCTSSs) or low concentration training sites (LCTSSs) without a maintenance capability, when this procedure would be more economical than scheduling equipment into the shop.
 - (6) Provide backup unit maintenance that is beyond the capabilities of units using training sites. Provide administrative and operational control support for assigned unit assets to include readiness reporting to parent organizations.
 - (7) Perform DS maintenance when authorized by the SMM.
 - (8) Equipment evacuation. Equipment evacuation is handled as follows:
 - (a) Process and evacuate equipment to CSMS/MATES when required. Movement of this equipment will be supported by unit personnel.
 - (b) Movement of equipment to OMS requiring unit maintenance/repairs will be supported by unit personnel.
- g.* The operation and supervision of an organizational maintenance subshop (OMSS) is the responsibility of the parent OMS.
- h.* UTES, in the ARNG, is an activity authorized to perform in-storage unit maintenance and, when authorized by the SMM, limited DS maintenance. The UTES is under the control and supervision of the SMM. This activity will perform the following functions:
- (1) Maintain and secure major items of equipment positioned at the UTES.
 - (2) Accomplish the required in-storage unit, and limited DS maintenance, on all organic and hand-receipted equipment positioned at the UTES.
 - (3) Maintain BII, COEI, and ITIA or an authorized, or additional, authorized list (AAL) required by each owning unit for all major items of equipment positioned at the UTES.
 - (4) Requisition, stock, maintain, and issue unit level class IX items in support of the equipment positioned at the UTES.
 - (5) Submit DA Form 2407 to the CSMS for all DS and GS maintenance requirements for organic and hand-receipted equipment positioned at the UTES. The UTES foreman or a formally designated representative will sign each DA Form 2407 submitted with a priority of 03 through 10.
 - (6) Prepare a DA Form 2406 for each unit positioning equipment at the UTES per AR 700-138.
 - (7) Ensure that complete TAMMS forms are submitted to the property book officer (PBO) and automatic data processing (ADP) activity.
- i.* The MATES is an ARNG TDA maintenance facility which, when collocated with a CSMS, provides full-time unit level support on ARNG equipment assigned to the site. When a MATES is not collocated with a CSMS, the MATES provides unit, DS, and GS level support to assigned equipment and units. The MATES provides support in the conduct of maintenance training. MATES operations are outlined in NGR 750-2.
- j.* USAR AMSAs have been established to perform unit level maintenance which is beyond the Army Reserve commander's capability or authorization to perform during scheduled training assemblies. Geographical support boundaries are assigned by the parent MUSARC with USARC final approval. The AMSAs are designated as AMSA (G) for ground support equipment, AMSA (W) for watercraft, or AMSA (G/W) for ground and watercraft.
- k.* ECSs have a maintenance branch with an area support mission and a storage branch for that equipment beyond the capability of the owning unit commander to store, maintain, or utilize at home station. Preference for storage

location should be at unit's mobilization or annual training site to minimize transportation costs and time delays during mobilization.

l. Maintenance activities may be authorized by USARC to perform limited DS level maintenance.

3-10. DS maintenance

a. DS maintenance is characterized by—

- (1) One-stop service to supported units.
- (2) Highly mobile, weapon-system-oriented maintenance.
- (3) Backup support to unit level maintenance.

b. Divisional maintenance units will support organic elements of the division. Attached units are required to coordinate with the parent units for support. Non-divisional maintenance units will provide support on an area basis and backup support to divisional DS units.

c. DS units may grant authority to supported units to perform the next higher level of repair if the supported unit has the capability and capacity to perform the repair.

d. Non-divisional DS maintenance units will be assigned installation maintenance missions to ensure unit mission capability is maintained. These assignments will be approved and monitored by the installation materiel maintenance officer (IMMO).

e. MTOE DS maintenance personnel may perform duties of TDA maintenance activities to maintain skills and update MOS training.

f. All MTOE DS maintenance units will be provided adequate capability for furnishing on-site technical advice and maintenance support.

g. DS maintenance personnel will perform technical inspections of Class II, VII, and IX materiel to determine serviceability and completeness.

h. DS units will be the primary reentry point for unserviceable repairable Class IX materiel to the supply support activity.

i. Operations assigned to DS units will normally include the following:

- (1) Inspection of all items to—
 - (a) Verify serviceability of the item.
 - (b) Determine if unserviceable items were rendered unserviceable due to other than fair wear and tear (FWT). If negligence or willful misconduct is suspected, repair will not be made until a release statement is received per AR 735-5.
 - (c) Determine economic reparability.
 - (2) Repair of unserviceable economically repairable end items per MACs. These will be repaired and returned to the user.
 - (3) Repair of all economically repairable components when MAC F-coded level repair will return the items to a serviceable condition. These items will be repaired and returned to the requesting maintenance or supply activity.
 - (4) Provision of proactive materiel readiness and technical assistance of unit maintenance elements including—
 - (a) Visits to supported units on a regular basis.
 - (b) Advice to supported units in proper methods for performing maintenance and related logistics support.
 - (c) Coordination with supported units to perform technical inspection when requested.
 - (d) On-site assistance to supported units.
 - (5) Diagnosis and isolation of materiel or module malfunctions, adjustment, and alignment of modules that can be readily completed with assigned tools and TMDE.
 - (6) Performance of light body repair to include straightening, welding, sanding, and painting of skirts, fenders, body, and hull sections when required to stop corrosion or retain structural integrity.
 - (7) Evacuation of economically repairable end items to designated maintenance facilities when repair is beyond authorized capability or capacity. Evacuation and return after repair will be through maintenance channels.
 - (8) Evacuation of maintenance repair code D, H, and L economically repairable components to the supporting supply activity if repairs are beyond MAC F coded repairs.
 - (9) Evacuation of economically repairable components that can be returned to a serviceable condition using MAC F level repair to designated maintenance facilities when repair is beyond capability or capacity. Evacuation and return after repair will be through maintenance channels.
 - (10) Provide backup DS maintenance support to other DS units and request backup support from other DS and GS units as required.
 - (11) Fabrication as identified by the appropriate technical manual.
- j.* The ARNG CSMS will perform DS and GS maintenance on all Federal surface equipment. The CSMS is under the control and supervision of the SMM and provides DS and GS maintenance to—
- (1) Equipment prepositioned at a collocated MATES and/or UTES.

- (2) Backup support to non-allocated MATES.
- (3) Supported OMSs.
- (4) Any DOD agency when authorized by CNGB.

k. USAR TDA maintenance activities are authorized to perform limited DS maintenance as authorized by the USARC. The authorization is contingent upon availability of required resources and skilled personnel. An alternate DS activity within the geographic support area may be used when the activity backlog exceeds 21 days. If used, an ISA or contract may be required. DS components will be evacuated to the most cost effective location for repair or replacement.

3-11. GS maintenance

- a. GS maintenance is characterized by—
 - (1) Commodity oriented repair of components and end items in support of the theater supply system.
 - (2) Backup maintenance support to DS units.
 - (3) Job shop/bay or production line operations with the capability to task organize to meet special mission requirements.
 - (4) Location at echelons above corps.
- b. GS units may grant authority to supported units to perform the next higher level of repair if the supported unit has the capability and capacity to perform the repair.
- c. Nondivisional GS maintenance units will be assigned installation maintenance missions to ensure unit mission capability is maintained. These assignments will be approved and monitored by the IMMO.
- d. MTOE GS maintenance personnel may perform duties at TDA maintenance activities to maintain skills and update MOS training.
- e. All MTOE GS maintenance units will be provided adequate capability for furnishing onsite technical advice and maintenance support.
- f. GS maintenance personnel will perform technical inspections of Class II, VII, and IX materiel to determine serviceability and completeness.
- g. Operations assigned to GS level will normally include the following:
 - (1) Diagnosis, isolation, and repair of faults within modules/components per MACs.
 - (2) Repair of selected LRUs and PCBs per the MACs.
 - (3) Performance of heavy body, hull, turret, and frame repair per the MACs.
 - (4) Area maintenance support, to include technical assistance and onsite maintenance as required or requested.
 - (5) Collection and classification of Class VII materiel (less aircraft, ammunition, missiles and medical materiel) for proper disposition.
 - (6) Operation of cannibalization points, when authorized by MACOM commanders (AR 710-2).
 - (7) Evacuation of unserviceable end items and components, through the appropriate supply support activity.
 - (8) Fabrication or manufacture of repair parts, assemblies, components, jigs, and fixtures when approved by the MACOM.
 - (9) Request for backup support as required.

3-12. TDA installation maintenance

- a. IMMAs will perform DS and GS level maintenance. IMMAs will also perform unit level maintenance for units that do not have organic unit maintenance capability. Procedures for establishing, operating, transferring, or discontinuing IMMAs are in DA Pam 750-13. The list of approved IMMAs is in appendix B.
- b. IMMAs will not be workloaded to the detriment of TOE units. This is to ensure that TOE DS and GS maintenance units maintain skill proficiencies and mission capabilities.
- c. There is only one IMMA at an installation. IMMAs do not include—
 - (1) MTOE units.
 - (2) Area maintenance and supply facilities (AMSFs).
 - (3) Communications security (COMSEC) logistics support facility (CLSF).
 - (4) Regional maintenance training sites (RMTS).
 - (5) MATES operated by the ARNG.
 - (6) AMSAs and ECSs operated by the Army Reserve.
 - (7) Area maintenance facilities (AMFs) or AMSFs for air traffic control equipment.
- d. Installation commanders will select the IMMO.
- e. The IMMO will—
 - (1) Coordinate all Active Army maintenance resources within the installation's geographic support area except those managed by USAISC, INSCOM, TSG, and U.S. Army Medical Command.

(2) Review all installation maintenance activities on an annual basis to ensure continued effectiveness and economical support and recommend TDA maintenance consolidations, when required, through the chain of command.

f. Operations assigned to an IMMA will normally include the following:

- (1) DS, GS, and AVIM support on a geographical area basis.
- (2) Maintenance and issue of operational readiness float when the IMMA is assigned the mission.
- (3) Operation of a cannibalization point.
- (4) Maintenance technical assistance to supported units and activities.
- (5) Maintenance of all materiel required to operate the installation.

g. IMMAs must be readily expandable to support mobilization workloads and maintenance requirements when MTOE units are displaced or inactivated.

h. Centralized maintenance production planning and control activities are established under the control of the IMMO.

i. The DS and GS maintenance workload requirements beyond the IMMA's capability or capacity will be done by other DS and GS activities in the geographical support area on a reimbursable basis. This workload may also be done by interservice support agreement (ISA) or contract. Contracts with commercial sources are administered per the FARs.

3-13. Specialized repair activity (SRA)

a. An SRA is an installation TDA activity or a GS level unit (including AVIM) that has been authorized by HQDA to perform specific maintenance repair code (MRC) "D" and "L" repairs. The SRA will be directly funded with customer level Operations and Maintenance, Army (O&MA) funds.

b. Installations, units, or activities will prepare requests for SRA approval in the format at figure 3-1. The requests will be forwarded directly to the MSC identified by the AMDF source of supply code. Information copies of the requests will be forwarded to—

(1) HQAMC (Commander, U.S. Army Materiel Command, ATTN: AMCLG-MI, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001).

(2) USALEA (Commander, U.S. Army Logistics Evaluation Agency, ATTN: LOEA-OS, New Cumberland, PA 17070-5007).

(3) The requesting installation, unit, or activity's MACOM headquarters.

c. SRA requests that require certification by the approving AMC Commodity Command will maximize the use of local expertise, such as Logistics Assistance Representatives or other National Maintenance Point personnel, to validate the SRA request. If this cannot be accomplished by local expertise or telephonically between personnel of the certifying and requesting activities, the cost of TDY associated with the certification will be borne by the requestor. All such costs will be included in the economic analysis performed on the SRA request. Prior to initiating the SRA approval requests, Installations are urged to contact the Logistics Support Agency (DSN 645-9961) for estimated costs of any associated TDY.

d. MSC recommended disapprovals will be forwarded to the HQAMC for in-depth evaluation and approval, or endorsements to USALEA. USALEA will evaluate the request and recommend final action to HQDA (DALO-SM). HQDA is the final disapproval authority.

e. Installations, units, or activities with SRA approvals are required to report to USALEA the total number of SRA repairs and actual repair costs for each authorized NSN for each fiscal year. The reports are to be received at USALEA not later than 1 December each year.

f. HQAMC will—

(1) Develop an automated system to—

(a) Provide uniform guidance to all MSCs for evaluating SRA requests.

(b) Determine the amount of depot workload offset by SRAs, with emphasis being given to maintaining the economic stability of SFDLR item cost to the customer and minimizing the impact on the DBOF repair rate structure.

(c) Generate any required reports.

(2) Provide a monthly report to HQDA (DALO-SMM) and USALEA detailing, by MSC and requestor, the number of requests approved, and the number of requests over 45 days old, to include status of actions being taken to clear the requests.

(3) Initiate action to evaluate the extensions of authorized SRAs 60 days prior to the expiration date of the SRA authority.

g. USALEA will—

(1) Act as the independent evaluator for ODCSLOG to perform evaluations of approved SRA actions, as well as recommendations for SRA request disapproval that will be forwarded from HQAMC.

(2) Evaluate the yearly SRA production data reports and provide findings to HQDA (DALO-SMM).

3-14. Depot level maintenance

a. Detailed policy and guidance for depot level maintenance is located in AR 750-2.

- b. Depot level maintenance will support both the combat forces and the Army supply system as shown below:
 - (1) Depot level maintenance will provide technical support and backup to DS and GS maintenance units. A joint decision is required between the theater Army (TA) commander, and CG, AMC to determine the relationship of AMC supply and maintenance activities with the theater commander in peacetime.
 - (2) In wartime, the theater commander assumes control of depot level maintenance operations in the theater of operations.
 - (3) Depot level maintenance provides combat ready materiel to the Army supply system.
- c. Depot level maintenance will normally be performed by TDA industrial-type activities operated by the Army. Depot level maintenance may also be performed by contract, ISA, and interdepartmental or interagency agreement.
- d. Depot level repairs may be authorized, in writing, for the next lower level of maintenance. This is a one-time, non-recurring authorization and is based on the lower level's capability and capacity. The responsible NMP will grant the authorization. The cost is direct funded by the requesting MACOM.
- e. A forward repair activity (FRA) is an AMC resourced, directed, and controlled activity, operated by contractor or organic personnel, which provides depot level support forward of the depot. Where possible, FRAs will provide support for multiple weapon systems or commodities. The policies for depot reparable accountability (turn-in and requisition, and Defense Business Operating Fund-Supply and Maintenance Army (DBOF-SMA)) apply to FRAs.

3-15. Authorization for ARNG maintenance facilities

- a. Requests to establish surface maintenance facilities will be submitted to Headquarters, National Guard Bureau, ATTN: NGB-ARL-M, 111 South George Mason Dr., Arlington, VA 22204-1382, for approval. Requests to establish Army aviation activities will be in accordance with NGR 95-1 and submitted to Headquarters, National Guard Bureau, ATTN: NGB-AVN, WASH DC 22310 for approval.
- b. These requests will include the following information:
 - (1) List of units by TOE, authorized and on-hand equipment density to be supported, and the MTOE/TDA maintenance capabilities of the designated parent unit.
 - (2) How the facilities are acquired, leased or licensed, and the estimated cost.
 - (3) The annual cost, if the facility is leased.
 - (4) Renovation and/or rehabilitation costs that are required before occupancy.
 - (5) Estimated annual operations and maintenance cost of proposed facility.
 - (6) Effect that relocation will have on technician work force.
- c. Upon approval of a maintenance facility request, the State adjutant general will publish a change to the State equipment maintenance support plan.
- d. NGB Pam 570-1 prescribes the manning criteria for maintenance activities.
- e. Criteria for construction of maintenance facilities is prescribed in NGR 415-10.

3-16. Designation of parent units in the ARNG

- a. The parent unit of a CSMS or support MATES is an ARNG MTOE unit that possesses a DS or GS maintenance capability. When the State troop structure does not provide a unit with the required MTOE maintenance capability, authority will be requested from the CNGB to modify the TDA to reflect the necessary maintenance capability. Where partial mobilization would have an adverse impact on the State, the adjutant general may request an exception to this policy from the CNGB.
- b. The parent unit of an Army aviation activity is the ARNG MTOE unit supported by the facility with the greatest aviation maintenance capability. NGB-AVN has determined total equipment requirements for Army aviation activities based on assigned missions. TDAs have been established which represent differences between equipment authorizations of the parent unit and equipment required to perform assigned missions.
- c. Requests to establish an OMS/UTES will include the following factors:
 - (1) Support to a minimum of three MTOE company-size units, or an equipment density of 3 workdays. A request to establish an OMS/UTES to support less than three units will include complete justification for the requirements and specify why the units cannot be dependent upon existing facilities for support.
 - (2) Density and type of equipment to be supported.
 - (3) Availability of facilities and additional facilities required.
 - (4) Geographic location of proposed site for the facility in relation to units to be supported. Unit integrity is the primary consideration, but it is not intended that every battalion-size organization be supported by a separate OMS. The maintenance support plan can be developed to require dependent units to be supported by the OMS nearest the equipment requiring the maintenance support.
 - (5) The parent unit should be an MTOE unit having a unit maintenance capability; that is, battalion maintenance platoon, battalion maintenance section, or the maintenance sections of a separate company. If this is impractical, authority may be requested from the CNGB to assign another activity as parent unit. Unit maintenance tools and

equipment, which are not available in the approved TOE of the parent unit or other units supported by the OMS, will be requested for inclusion on the State Area Command (STARC) TDA.

(6) The OMS should be located at, or near, the parent unit armory.

d. Upon approval by the CNGB, a State may be authorized an OMSS as follows:

(1) Authorization may be made for the specific purposes of supplementing available shop space of a parent OMS or a subshop may be requested for NGB consideration when a unit is located an appreciable distance from the parent OMS.

(2) OMSSs will be designated with the parent OMS number and an alphabetic suffix, that is, the first subshop of OMS 3 will be designated 3A.

e. Each State, the District of Columbia, Puerto Rico, Guam and the Virgin Islands, will prepare and maintain a current State surface equipment maintenance support plan (RCS 12). An annual update of this plan for surface equipment must be furnished to Headquarters, National Guard Bureau, ATTN: NGB-ARL-M, 111 South George Mason Dr., Arlington, VA 22204-1382. The plan will be submitted in January or as significant changes occur. This plan must include—

(1) An official State highway map with an overlay showing the location of all maintenance facilities and supported units.

(2) A complete maintenance support plan reflecting all maintenance facilities and supported units is shown in table 3-2.

Table 3-1
Destination of maintenance priority designators

FAD\UND	A	B	C
I	01	04	11
II	02	05	12
III	03	06	13
IV	07	09	14
V	08	10	15

Notes:

¹ FAD: Force Activity Designator.

² UND: Urgency of Need Designator.

Table 3-2
ARNG Maintenance Support Plan sample format

ARNG Maintenance Support Plan					
Type of facility					OMS
Facility					S05
City					Fairbanks
State					Alaska
State code					02
Shop condition ¹					A
Number of workdays					2
Authorized No. of tech					5
On board No. of tech					5
Support unit information					00
UIC WVB2B0	Unit Name B(-)/5/297Inf7	MTOE 20-500H	DODAAC WC1RYE	City Fairbanks	Mileage collocated

Legend for Table 3-2:

¹ Condition codes

A—adequate

B—renovation or modification required

C—expansion (C, Sq ft) only code with 8 characters)

D—nonexistent

(Prepared by submitting activity)

1. UIC of requesting activity/unit:
2. NSN of item:
3. AMDF source of supply code (B14, B16, etc.):
4. Nomenclature:
5. End item application (End item code):
6. AMDF maintenance repair code (D or L):
7. Repair of NSN: Total or partial (circle one). If partial, which depot level tasks are proposed to be performed by the SRA?
8. Skills, tools, TMDE, facilities, and publications on hand at the requesting unit (if needed, add a continuation sheet):
 - a. Skills (including certification for MIL-STD-2000 soldering):
 - b. Tools/equipment (state if required or on hand):
 - c. TMDE/TPS (state if required or on hand):
 - d. Facilities (state if required or on hand):
 - e. Publications:
9. Yearly number of items to be repaired:
10. Time limit of SRA (3 years max, AV normally 1 year):
11. Cost benefit analysis:
 - a. Buy costs: AMDF price less turn-in credit:
 - b. Local repair costs:
 - (1) Direct labor hours (X rate)
 - (2) Indirect labor hours (X rate)
 - (3) Average parts cost (total per repair)
 - (4) Overhead costs (hours X rate)
 - c. Unit savings (a - b):
 - d. One-time start-up costs which are non-recurring, including facilitization. Amortize against items 9 and 11c above):
 - e. Total estimated savings (11c X 9 X 10)

Figure 3-1. Format for a Request for SRA Authority

Instructions keyed to numbers on format:

1. Self-explanatory.
2. NSN of the component to be repaired.
3. Self-explanatory.
4. From the AMDF.
5. List all codes if item has multiple end item applications.
6. From the AMDF.
7. Circle either partial or total. If only partial repair is requested, be specific in description, such as "replace top seal". This is particularly critical in aircraft components where repair of the whole item is seldom authorized.
8. a. Skills. Be specific. Special skills, such as special soldering, may need to be certified prior to authorization of an SRA. State if certified for a previously approved SRA.

b. Tools/equipment. Be specific. Some requirements may not be known; approvals may be conditioned on obtaining the capability required but not on hand.

c. Same as 8.b.

d. Same as 8.b.

e. Same as 8.b.
9. This is very important as it may impact on the annual depot program for the item and the amortization of one-time costs indicated in item 11.d.
10. The maximum authorization is 3 years. Aviation items are normally limited to 1 year due to safety of flight considerations. Ask for what you need, but no more than 3 years.
11. The cost factors involved are self explanatory. Use the best possible estimate of indirect labor hours. You may amortize the one-time start up costs over several years if necessary to demonstrate your point; however, only the number of years requested which are greater than the number of years used for amortization may be used in 11e. Be sure to show the number of years clearly.

Figure 3-1. Format for a Request for SRA Authority—Continued

Chapter 4

Maintenance Operations

Section I

Materiel Repair and Evacuation

4-1. General

- a.* Proper performance of PMCS by the equipment operator will ensure early detection of faults and maintenance requirements.
- b.* MACs specify what tasks can be performed at each level of maintenance.
- c.* To ensure the most cost-effective use of maintenance resources, the economic reparability of unserviceable materiel will be determined per paragraph 4-5 prior to initiating any action to repair the materiel.
- d.* The decision to repair or evacuate is based on the maintenance repair and recoverability codes, urgency of need, and a mission, enemy, time, terrain, troops-available (METT-T) analysis.
- e.* Uneconomically repairable materiel will not be evacuated beyond the level authorized to dispose of or reutilize the materiel.
- f.* All actions relative to the inspection, classification, verification, and disposition of uneconomically repairable equipment will be accomplished in an accurate and timely manner.
- g.* Materiel will be disposed of per AR 710-2.
- h.* No one individual will perform duties as both a materiel repairer and shop stock clerk at the same time.

4-2. Unserviceable materiel

- a.* Unserviceable end items that cannot be repaired promptly will be evacuated to the supporting maintenance activity. Unserviceable reparables will be evacuated through the appropriate supply support activity.
- b.* DS and GS maintenance units will provide backup evacuation support to supported units.
- c.* Materiel will be protected (packaged/crated) to prevent further damage during evacuation. This includes all BII and components.
- d.* DS and GS maintenance units will not hold unserviceable materiel that they do not intend to repair.

4-3. Technical inspections (TIs)

- a.* A TI will be performed prior to repair or evacuation of unserviceable end items or components. TIs are to be made by a technically qualified individual. Inspections will be performed according to equipment maintenance and serviceability standards applicable to the maintenance level performing the repair. The results of the TIs are used to—
 - (1) Verify serviceability.
 - (2) Determine the economic reparability of the item.
 - (3) Determine the extent of maintenance effort and repair parts required to restore the item to the prescribed serviceable condition.
 - (4) Determine if unserviceable items were rendered unserviceable due to other than fair wear and tear.
 - (5) Determine estimated cost of damages (ECOD).
- b.* The TI which accompanies a request for disposition to the NICP will be verified by a senior inspector, maintenance technician, or maintenance/motor officer as specified by the MACOM.
- c.* When the TI supports an investigation of pecuniary liability and actual costs cannot be determined, inspectors will prepare an ECOD. Basic policy guidance for an ECOD in support of a report of survey is in AR 735-5.
- d.* DA Form 2404 or other approved forms will be used to record results of technical inspections.

4-4. Verification inspections

Verification inspections of major end items ensure the accuracy of a TI when it results in unserviceable, uneconomically repairable condition codes (CCs) of H or P.

- a.* MACOM commanders without subordinate installations and installation commanders will—
 - (1) Ensure that technical inspections resulting in unserviceable, uneconomically repairable CCs of H or P, are verified using independent inspections prior to requesting disposition instructions per AR 710-2. Verification inspection will not be performed by the individual performing the initial condition code classification.
 - (2) Ensure that inspectors conducting verification inspections are technically qualified in the equipment commodity they are inspecting.
- b.* The recording of a verification inspection will be done by typing or stamping a statement on the original inspection form. The required data elements are—

- (1) Organization of the verifying inspector.
- (2) Inspector's name and grade.
- (3) Date of inspection.
- (4) Signature of inspector.

c. Major end items with CC H or P that fail a verification inspection will be referred to the maintenance officer with the corrected classification. The maintenance officer will determine further action required to repair the item.

4-5. Maintenance expenditure limit (MEL)

a. MEL is the total allowable one-time cost to restore an end item, major component, or reparable component to a fully serviceable condition as prescribed in the appropriate TM. Current MELs are listed in the TB 43-0002-series.

(1) MEL is used to ensure economic and operational effectiveness of Army maintenance at all levels. Depot level assistance may be obtained through the LAO.

(2) Required repairs will not be broken into separate job estimates to bypass prescribed MELs.

b. MEL for repair of end items (for example, trucks and generators) and major components (for example, receivers and machine-guns) at DS and GS levels of maintenance is expressed as a percentage of the current unit replacement price.

(1) The MEL is reviewed at least annually and updated as required. Interim changes are incorporated into the base document within 1 year.

(2) Planning prices in SB 710-1-1 will be the source of replacement costs for end items.

(3) The Army Master Data File (AMDF) prices will be used as the source of replacement costs for reparables. Local/geographical costs will be used for overhead and labor costs.

(4) Commercial equipment purchased by a MACOM will have a MEL established and published by that MACOM.

c. MACOM commanders have one-time approval authority on requests for waiver of published MEL when the required maintenance can be accomplished at DS and GS levels of maintenance, or by local contract. In approving such requests, commanders will ensure that—

(1) A replacement item is not available by the RDD.

(2) Resources are available or can be made available to the requesting organization to do the repairs prior to the required delivery date.

(3) Requesting organizations submit a repair cost estimate and justification for retention.

d. Installation commanders within AMC are authorized to approve repairs that exceed MEL for commercial equipment and do not require materiel proponent approval. Installation commanders will contact the U.S. AMC Installations and Services Activity, Rock Island, IL to ensure that excess equipment is not available or that new procurement would not prove to be more cost-effective. HQ, AMC maintains a listing of specific pieces of equipment included under this waiver.

e. When a replacement item is not available the materiel proponent may grant an exemption from MEL.

f. Repair cost estimates at the DS and GS levels of maintenance are based on the cost to return materiel to serviceable condition.

g. The cost estimate is based on all costs except those specifically excluded herein.

h. To determine repair eligibility, compare the cost estimate with the MEL percentage multiplied by the replacement cost as listed in SB 710-1-1.

i. The following direct costs will be used to determine repair cost estimates when faults are found during technical inspections:

(1) *Direct labor.* Direct labor is that labor (civilian or military) that can be specifically identified to the repair to be performed. Direct labor involves only personnel in direct productive contact with the item or service involved. This does not include initial inspection. To estimate direct labor costs, determine/estimate the direct labor man-hours required and multiply by the appropriate hourly labor rate. (See (a) through (d) below.)

(a) *Direct labor man-hours.* The determination of the direct labor man-hours to be applied will be based on working hour requirements for maintenance tasks listed in applicable equipment publications; commercial flat rate manuals, when appropriate; similar work performed previously; or individual experience. The direct labor man-hours will be periodically reviewed and updated, if necessary.

(b) *Civilian labor rates.* The cost of civilian labor will be based on a labor rate for the work center that will perform the work. Labor rates, whether determined from annual salaries or hourly wage rates, will be provided by the servicing finance and accounting office.

(c) *Military labor rates.* Labor rates for military personnel will be the average military wage rate for the work center performing the work. These rates will be provided by the servicing Finance and Accounting Office.

(d) *Established labor rates.* Major Army commanders and directors of agencies may establish and use standard hourly rates for direct and indirect (or overhead) labor, so long as such rates are consistent with AR 37-1. When such standard rates are established, separate rates are established for each category of supportable materiel, commodity

group of equipment, and weapon system. A separate standard labor rate will be established for each major geographical area where wage levels vary significantly.

(2) *Matériel*. The cost to repair includes all matériel, including PA-funded matériel, directly applied to the particular equipment undergoing repair. (See (a) through (c) below.)

(a) Consumable items received from the supply system may be costed as billed by the supply agency. If no billing is available, consumables are costed at the standard inventory price as published in appropriate supply manuals or AMDF. Items procured from local sources are priced at the latest invoice cost. Cost of items fabricated will be based on actual cost, where possible. When actual cost is not available, engineering estimates, including indirect expenses, will be used.

(b) Government-furnished matériels expended by a contractor in performing all or part of the repair will be costed at the standard inventory price.

(c) Replacement components and assemblies used in the repair process will be costed at the standard inventory price. Credit is taken for the return of the reparable component in an amount equal to the current standard inventory price, less the estimated cost to repair the component.

(3) *Freight and packaging*.

(a) Freight will not be included as an element of cost when the equipment to be repaired is located in CONUS. When the equipment to be repaired is located overseas and no local capability to repair exists, the cost of freight to CONUS will be included as an element of cost. The cost of freight will include all transportation and handling cost from point of use to designated CONUS point of repair.

(b) When equipment cannot be repaired onsite, and costs are incurred to prepare the equipment for shipment, such cost (including materials) will be included in the estimate of cost to repair regardless of origin or destination.

j. Indirect costs to be included will be determined by applying the indirect or overhead rate, computed using AR 37-1, to the estimated direct labor man-hours. The indirect expense rate will include the following:

(1) Manufacture or production expenses. These expenses are costs incurred within or identifiable to the maintenance shop or organization performing the repair work, although not identifiable to particular jobs.

(2) General and administrative expenses. These expenses are costs incurred in the general management or supervision of the installation as a whole that are allocated among maintenance and other activities.

k. Miscellaneous costs of repair will include all contractual services acquired incidental to, and identifiable with, the performance of all or a portion of the specific repair. All other costs required to accomplish the repair that are directly identifiable with the equipment will be included except those directly named in *m* below.

l. Items of operating expense will include all scheduled and unscheduled services and repairs that are accomplished by the using organization, including repair parts. These costs will be included when the item being repaired is excess to unit needs, was damaged accidentally, or is repaired by higher level maintenance on a non-return basis. See exception in *m* below.

m. The following costs will not be included in the estimate of cost to repair:

(1) Replacement of basic issue list items.

(2) The labor cost of applying modification work orders.

(3) The cost to overhaul or replace accessory items used to adapt equipment for special uses. This would include such items as rank insignia, winterization kits, flashing lights, two-way radios, tool kits, and similar items. Individual estimates to overhaul such items will be made as appropriate and required.

(4) Items of operating expense, when the item being repaired is not excess to unit needs, has not been accidentally damaged, or is repaired by higher level maintenance on a return-to-user basis.

4-6. Equipment transfer and turn-in

a. Equipment that is transferred between MACOMs, transferred into war reserves or prepositioning of matériel configured to units sets (POMCUS), prepared for storage below wholesale level, and other specified stocks will meet the following requirements:

(1) The maintenance standard as defined in paragraph 3-1 a.

(2) Scheduled services will be performed if 90 percent of service interval (using criteria outlined in applicable schedule) has expired as of the transfer date reflected in disposition instructions from the wholesale manager. The criteria for services of time is suspended during shipment and will resume upon acceptance at gaining site.

(3) Equipment to be transferred should be inspected by the losing command a minimum of 120 days prior to the transfer date, allowing parts to be requisitioned and received, so that corrective actions can be completed prior to the acceptance inspection. Equipment being transferred should be inspected for acceptance by the receiving command, or appropriate agency, a minimum of 60 days prior to transfer date. This inspection serves as the final acceptance inspection and establishes corrective action required by the losing MACOM unit before transfer. It also serves as a baseline for the verification of equipment condition at the receiving location. MACOMs and agencies are responsible for funding TDY related to their responsibilities for inspections as outlined.

(4) The results of TM 10- and 20-series PMCS and PMIS acceptance inspections (record copy of DA Form 2404) and other records required by DA Pam 738-750 and DA Pam 738-751 will accompany the equipment.

(5) Gun tubes have a minimum of 75 rounds of effective full charge remaining when transferred between MACOMs, into war reserve, POMCUS, or other specified stocks.

(6) Equipment accepted for depot overhaul via the Combat Vehicle Evaluation (CVE) Program will not be transferred between MACOMs.

b. Equipment transfer between MACOMs in unit sets (force package fielding) will meet the following requirements in addition to those in *a* above:

(1) Requisitions for repair parts with estimated delivery dates past the transfer date will be canceled. Appropriate funds (price from current AMDF) will be transferred to AMC as specified in the MOA.

(2) Outstanding DS (or higher) maintenance requests that cannot be completed prior to transfer will—

(*a*) Require the gaining and losing MACOMs to negotiate an acceptable solution such as delayed transfer dates for specific pieces of equipment. Agreement requires concurrence of DA DCSOPS.

(*b*) Be canceled. Appropriate funds (current AMDF price) will be transferred to AMC as outlined in transfer MOA.

(3) MACOMs/agencies are responsible for funding TDY related to their responsibilities for transfers as outlined above.

c. AMC responsibilities for unit set transfers between MACOMs are to—

(1) Serve as arbitrator for inspections outlined in *a* (3) above.

(2) Receive funds transferred from losing MACOMs as outlined in subparagraph *b* above.

(3) Perform corrective actions at the receiving/handoff site to ensure equipment is in the same condition as reflected by record copy of acceptance inspection required in *a* (3) and (4) above.

(4) Provide total package fielding support to gaining MACOM.

d. Equipment transferred between MACOMs in other than unit sets will meet the requirements in *a* above. In addition, equipment will not be transferred until all corrective actions requiring parts are completed and DS and higher maintenance requests are completed.

e. MACOM commanders will establish the standard for materiel transferred between units in the MACOM. Use of TM 10- and 20-series PMCS maintenance standard is encouraged. MACOM commanders will provide necessary maintenance resources and assign responsibility for repair of materiel in the MACOM.

f. Equipment turn-in is accomplished as follows:

(1) Equipment turned in for depot overhaul is not required to meet the transfer standards outlined above. Equipment will be turned in “as is” complete (including BII and COEI), unless an exception is made by AMC.

(2) Materiel at unit level that is excess as a result of changes in authorization documents or displaced equipment will be turned in using the standard outlined in *a* above, unless an exception is made by AMC. AMC may provide an exception for equipment accepted for depot overhaul or rebuild, equipment being disposed of, or other equipment if an appropriate reason exists. Other excess materiel (that is, found on post) may be turned in to the supporting supply activity in “as is” condition.

(3) Materiel above the unit level (that is, supply support activity or theater war reserve) reported excess will—

(*a*) Not be scheduled for repair or maintenance services unless directed by the national inventory control point.

(*b*) Be maintained in its present condition by the owning organization.

(*c*) Not be cannibalized or involved in parts substitution without prior authorization from the national inventory control point (NICP).

g. Exceptions are as shown below:

(1) Aviation equipment transferred between property accounts will conform to the serviceability criteria contained in TM 1-1500-328-23.

(2) Equipment used as training aids and is assembled and disassembled is assigned a condition code of “F” or less. Depot overhaul is required to transfer or reissue this equipment. Equipment used for base operations or for the original purpose operator/crew training will meet the transfer/turn-in standard.

4-7. Controlled exchange

Controlled exchange is the removal of serviceable components from unserviceable economically reparable end items for immediate reuse in restoring a like item or weapon system to an FMC condition. The unserviceable component must be used to replace the serviceable component or retained with the end item that provided the serviceable component.

a. Controlled exchange is authorized only when—

(1) Required components are not available from the supply system before the RDD.

(2) A valid requisition is submitted to replace the unserviceable item.

(3) The maintenance effort required to restore all of the unserviceable reparable materiel involved to a mission capable condition is within the MAC authorization and capability of the unit performing the controlled exchange.

(4) The end item or weapon system from which the serviceable component is removed is classified not mission capable supply (NMCS).

(5) An aircraft from which a serviceable component is removed must be classified NMCS, not mission capable maintenance (NMCM), or partially mission capable (PMC).

(6) Aircraft maintenance manual instructions require that a known serviceable component be temporarily used while troubleshooting. Such components may be temporarily exchanged from a fully or partially mission capable aircraft.

(7) The end item or weapon system will not be degraded to an uneconomically repairable condition.

(8) The end item or weapon system from which the serviceable component was removed is protected from further degradation.

(9) The unserviceable component is tagged and installed on, or retained with, the end item or weapon system from which the serviceable like item was removed. In addition, the removal of the component must be recorded on the DA Form 2407 or DA Form 2404 for the end item or weapon system. This is to retain the identity and integrity of the repairable end item or weapon system.

(10) The organization performing the controlled exchange takes prompt action to restore the unserviceable materiel to an FMC condition.

b. When the controlled exchange satisfies a requirement already in the Army supply system, that requisition will be either canceled or used to restore the unserviceable end item or weapon system to FMC.

c. Controlled exchange by using units is authorized only when—

(1) All of the unserviceable repairable materiel involved is owned or under control of the organization performing the controlled exchange.

(2) It is the only means reasonably available to eliminate an adverse effect on the operational readiness of the unit, organization, or activity performing the controlled exchange.

(3) Approved by the commander of the organization performing the controlled exchange.

d. Controlled exchange by DS and GS levels of maintenance will be authorized only when—

(1) It is the only means of providing an FMC end item or weapon system to a supported unit within the timeframe indicated by the issue priority designator on the maintenance request.

(2) Approved by the DS/GS commander, IMMO, or his designated representative.

e. During mobilization or combat, MACOM commanders may modify the controlled exchange conditions as deemed necessary.

f. Controlled exchange is not authorized when the materiel involved in an accident has not been formally released by the investigating officer.

g. Controlled exchange is not authorized on ORF assets.

4-8. Cannibalization of materiel

a. Cannibalization is the authorized removal of components from materiel designated for disposal. Cannibalization supplements supply operations by providing assets not immediately available through the Army supply system. Costs to cannibalize, urgency of need, and degradation to resale value of the end item should be considered in the determination to cannibalize.

b. Materiel awaiting disposition instructions will not be cannibalized without prior approval of the NICP.

c. Policies and procedures for establishment and operation of cannibalization points are contained in AR 710-2 and DA Pam 710-2-2.

d. During combat, commanders may authorize the cannibalization of disabled equipment only to facilitate repair of other equipment for return to combat. No parts will be cannibalized for stockage at the battalion level.

e. Cannibalization is not authorized on ORF assets.

4-9. Modification work orders (MWOs)

a. Modifications to Army materiel are either mandatory (urgent, limited urgent, or normal) or nonmandatory (minor alterations, special purpose, or special mission modification).

b. Mandatory modifications are authorized for application by DA Modification Work Order (DAMWO). Some MWOs are implemented by MWO fielding plans (MWOFPs). The proponent for the MWO is responsible for applying the MWO. The MWO Application Completion System is maintained at the USAMC Systems Integration and Management Activity (SIMA)-West and can provide information on MWOs.

c. Equipment awaiting application of an urgent MWO will be deadlined.

d. Limited urgent modifications will be applied within the timeframe specified in the MWO. If the modification is not applied within the specified time, the equipment will be deadlined.

e. Normal modifications are applied before the completion date stated in the MWO or MWOFP.

f. Commanders may authorize special modifications of materiel. Materiel must be able to be returned to its original state within 24 hours. Special modifications to aircraft and COMSEC equipment require prior approval from ATCOM and NSA, respectively.

Section II

Operations Management

4-10. Materiel records and reports

Materiel records and reports for maintenance management and performance of maintenance is prepared and maintained as prescribed in DA Pam 738-750, DA Pam 738-751, and AR 700-138.

4-11. Measurement of maintenance performance

a. The management of maintenance operations throughout the Army will be based upon a performance management approach that supports the Army management philosophy described in AR 5-1. This approach will enable the maintenance organization to develop a unified effort around goals and objectives.

b. The planning and controlling functions of management will be emphasized to ensure that—

- (1) Objectives are established to support mission goals.
- (2) Performance is measured against quantifiable standards that reflect the objectives.
- (3) Corrective actions taken are based on improving the factors that are constraining performance.

c. Maintenance performance measures are the key element of the control function of maintenance operations management. Through use of performance measures, commanders and managers will ensure that their maintenance operation is providing the best possible support to sustain combat readiness.

4-12. Unit level management

Commanders and managers will operate their unit level maintenance program per the procedures contained in FM 43-5 and DA Pam 750-35.

4-13. Utilization standards

a. MACOMs will ensure the establishment of a manhour accounting program where automated capability exists. Manhour accounting is optional where automation is not available and manual procedures must be used.

b. Unit commanders are responsible for the utilization of assigned military and civilian personnel. The maintenance supervisor is directly responsible for utilization of available maintenance personnel. Appendix C provides an explanation of and instructions for calculation of manhour utilization rates. The following are DA directed standards and goals for manhour utilization rates:

- (1) The standard for utilization of assigned civilian personnel is 85 percent.
- (2) The standard for utilization of available military personnel is 85 percent.
- (3) The goal for utilization of assigned military personnel is 50 percent.

4-14. Maintenance management systems

a. The primary functions of maintenance management include forecasting, distribution, scheduling, and production control of maintenance workloads. Maintenance management is accomplished through DA standard, MACOM standard, and corps, division, or installation unique systems.

b. The Army Maintenance Management System (TAMMS) and the Army Maintenance Management System-Aviation (TAMMS-A), as described in DA Pam 738-750 and DA Pam 738-751, prescribe manual procedures for preparation and management of forms and records required to manage maintenance, control use, and report warranty actions and faults on Army equipment. Automated systems report serial numbers of selected components for maintenance actions performed. Procedures and a list of selected components are contained in DA Pam 738-750. Automated system procedures are contained in the applicable system's user manual.

c. TAMMS data base will be maintained by the USAMC LOGSA per DA Pam 738-750.

d. TAMMS-A data base will be maintained by U.S. Army Aviation and Troop Command (ATCOM).

e. Automated systems implementing TAMMS take precedence over manual systems.

f. DA standard systems, when implemented, take precedence over MACOM and installation systems.

g. The Unit Level Logistics System (ULLS) is the DA standard system to automate TAMMS at unit level.

h. The Standard Army Maintenance System (SAMS) is the DA standard automated system having priority over the maintenance reporting and management (MRM) system and maintenance activity management system (MAMS). SAMS produced information from the work order transfer process is submitted weekly to the Commander, USAMC Logistics Support Activity, ATTN: AMXLS-RB, Redstone Arsenal, AL 35898-7466.

i. The support maintenance management system (SMMS) and maintenance information management system (MIMS) are the authorized MACOM installation standard systems until replaced by installation level SAMS.

j. The maintenance module of the DA standard multicommand system for the Army Medical Department Property Accounting System (AMEDDPAS) ADSM-18-HL3-RPB-IMB-UM is the automated maintenance management system for TDA medical maintenance activities. MTOE MED maintenance units use TB 38-750-2.

k. The mobile, production, and service equipment maintenance modules of the interactive AMC Standard Installation Equipment Management System (IMES) are the authorized automated system capabilities for all AMC units/activities per ADSM 18-L80-KAL-ZZZ-UM.

l. Standard Army Management Information System (STAMIS) Computer Exchange (SCX) is composed of commercial-off-the-shelf (COTS) computer systems including their associated peripheral equipment used to operate or support tactical STAMIS applications. SCX stockage will be located at DS SSAs and designated depots/FRA in a quantity initially determined by the Program Executive Office (PEO STAMIS). It will provide direct exchange support for the extended depot repair process described in paragraph 5-52c.

4-15. Work order logistics file (WOLF)

The WOLF is the Army central file for selected data from DA Form 2407 and DA Form 5504 (Maintenance Request) generated at DS and GS levels and transmitted through SAMS and MIMS. The WOLF—

- a. Provides maintenance data to materiel developers and commanders at all levels for maintenance engineering and maintenance performance.
- b. Is maintained by LOGSA.

Section III

Technical Assistance and Supply Interface

4-16. Technical assistance

Effective maintenance support of materiel combines the maintenance program conducted by the using activity and its supporting maintenance activity. Supporting maintenance activities must maintain a proactive liaison to assist using activities in accomplishing their materiel maintenance responsibilities.

4-17. Logistics Assistance Program (LAP)

The LAP is administered by AMC. The LAP provides technical and logistical assistance to unit and DS and GS levels of maintenance. The installation point of contact for LAP is the Logistics Assistance Office.

4-18. MAIT Program responsibilities

- a. The MAIT program is designed to—
 - (1) Upgrade Army materiel and units to a state of readiness consistent with assigned goals needed to carry out the Army mission.
 - (2) Develop unit capabilities to meet mobilization and contingency operations.
 - (3) Ensure that commanders at all levels are provided assistance in identifying and resolving maintenance, supply, and maintenance management problems within their units.
 - (4) Provide effective and responsive assistance and instruction (A and I) to units and activities.
 - (5) Augment the commander's capability for providing maintenance and associated logistic A and I to organic, attached, and supported units.
 - (6) Identify systemic problems in maintenance management and provide assistance to improve management of maintenance workload at unit, DS and GS levels.
 - (7) Generate an atmosphere of mutual trust between the MAIT and the supported unit. This allows unit personnel to participate actively in problem identification and resolution without fear that any derogatory information will be used as a basis for adverse command action.
- b. The DCSLOG will—
 - (1) Develop the MAIT Program.
 - (2) Approve or disapprove requests for program changes or deviation.
- c. Major Army commanders, except the CGs, Army Materiel Command, U.S. Army Criminal Investigation Command, and the Commander, Military Traffic Management Command (MTMC) will—
 - (1) Establish a MAIT program to support Active Army units.
 - (2) Establish a MAIT program at the Readiness Group (RG) or comparable level to support Army Reserve units. Installations, RGs, or Major U.S. Army Reserve Commands that do not have a resident MAIT will request A and I support from the closest MAIT.
 - (3) Ensure that MAIT teams are technically self-sufficient for the routine support mission.
 - (4) Provide for the temporary augmentation of MAIT to fill short-term or infrequent requirements for equipment and management skills not available from local resources.
 - (5) Ensure that sufficient funds and personnel are budgeted and allocated for MAIT operations.
 - (6) Coordinate technical assistance programs to provide maximum benefit to supported units with minimum resources.
 - (7) Ensure that any acronym that could be misconstrued as being MAIT is not used.

- (8) Review MAIT operations annually to ensure maximum program effectiveness.
- (9) Submit recommendations for MAIT Program improvement or deviation to HQDA (DALO-SMM), WASH DC 20310-0546.
- (10) Upon request, provide backup MAIT support to units of the ARNG. Such support should be reciprocal and is normally reimbursable.
- (11) Schedule periodic conferences between MACOM and CONUS/installation MAIT coordinators to highlight and resolve conflicts in policy and procedures.
 - d. CNGB will ensure that MAIT program services are furnished to units of the ARNG.
 - e. CONUS and OCONUS installations, corps, divisions, and ARNG and MUSARC commanders will—
 - (1) Have operational control of assigned MAITs.
 - (2) Ensure that MAIT members are technically competent and possess the ability to provide quality A and I.
 - (3) Ensure that assigned MAIT personnel receive training to maintain technical competence and remain current with changing logistics policies and procedures and instructional techniques. The MAIT will receive its share of new equipment training (NET).
 - (4) Request assistance from supporting activities and/or higher headquarters to correct problems that cannot be corrected within the command.
 - (5) Request, through channels, modifications to TOE/MTOE or TDA for personnel and equipment in support of the MAIT Program.
 - (6) Provide resources needed to carry out the MAIT Program.
 - (7) Periodically evaluate MAIT performance and effectiveness.
 - (8) Provide for periodic conferences between MAITs and evaluation and inspection teams to highlight and resolve possible conflicts in interpretation of logistic policy and procedures.
 - f. Commanders of units visited will—
 - (1) Ensure that appropriate personnel, materials, and records are available for the MAIT during scheduled A and I visits.
 - (2) Take prompt action to correct problems.
 - (3) Request assistance from supporting activities and/or higher headquarters to correct problems that cannot be corrected by the unit.
 - (4) Retain the latest two MAIT visit summaries.

4-19. MAIT Program policy

- a. The MAIT Program will be operated as a decentralized program.
 - (1) Teams will be established at installations, RG, or comparable levels in CONUS; and at corps, division, separate brigade, or comparable levels in overseas areas.
 - (2) The teams will be clearly identified in mission and function statements or operating regulations.
 - (3) A MAIT will not be established when troop or equipment density does not warrant it. In such cases, the responsibility for providing A and I is assigned to an established team within the geographic location according to AR 5-9.
- b. Personnel assigned to a MAIT will not participate in command inspections, annual general inspections, annual training evaluations, spot checks, roadside inspections, Command Logistics Review Teams (CLRT), or any other command evaluation program.
- c. When resources permit, each Active Army and Reserve Component unit will be visited annually. Visits to Reserve Component units will take place during scheduled drills and assemblies or during annual training periods.
- d. MAIT visits will not be scheduled during any inspection.
- e. Commanders of units visited are provided a summary report of the visit.
- f. MAIT visit results and summaries will not be given ratings or scores, nor will the information be revealed to any inspection agency. When the MAIT function is contracted, MAIT visit results will be available to quality assurance evaluators.
- g. MAITs provide semiannual overview briefings or published status reviews to brigade, division, corps, installation, and senior level Reserve Component commanders. Briefings should highlight significant problems encountered that apply command-wide, but will not identify specific units involved. Special emphasis is placed on providing the commander an overall assessment of conduct and supervision of PMCS within the command.

4-20. MAIT procedures

- a. The MAIT consists of the minimum number of specialists required to meet the needs of the visited unit.
- b. MAIT visits will be directed for specific units not meeting acceptable readiness standards or levels. Direct communication will be established between the units in need of assistance and the supporting MAIT.
- c. Participation by DS soldiers in MAIT visits is encouraged.
- d. Coordination between the unit and Active Component MAITs will take place at least 7 working days prior to a

directed or programmed visit. RG and ARNG MAITs will coordinate visits at least 30 calendar days prior to a directed or programmed visit. Matters to be discussed are as follows:

- (1) The date the visit will take place.
- (2) Known areas requiring A and I and the number of people who will receive instruction.
- (3) Location and facilities where A and I will be performed.
- (4) Quarters and messing facilities if required.
- (5) Special clothing, tools, equipment, and training aids required.
- (6) Security clearances needed for team members and clearances to enter restricted areas.
- (7) Entrance and exit interviews or critiques.

e. MAITs, as a minimum, will have the capability to assist and instruct units in improving operations and management in the following areas:

- (1) Operator requirements.
- (2) Preventive maintenance and equipment repair.
- (3) Equipment condition and serviceability.
- (4) Materiel condition status reporting.
- (5) Administrative storage.
- (6) Maintenance records and reports management.
- (7) Calibration management.
- (8) Proper use of tools and test equipment, troubleshooting, and fault diagnosis.
- (9) Maintenance personnel management and training.
- (10) Proper use of publications, and distribution procedures.
- (11) Shop layout.
- (12) Planning, production, and quality control procedures.
- (13) Safety.
- (14) Shop operations, including SOPs.
- (15) Facilities.
- (16) Proper implementation of the AOAP.
- (17) PLL procedures and PLL accountability.
- (18) Equipment recovery and evacuation.
- (19) Proper implementation of the Army Warranty Program.
- (20) Army modernization training.

f. The MAIT will consist of a team chief and sufficient personnel to provide effective A and I to supported units. Team size depends on the following:

- (1) Number and type of supported units and their geographic dispersion.
- (2) Density and type of equipment supported.
- (3) Commodities and areas that A and I addresses.
- (4) Frequency and time allotted for visits.

g. Military and civilian personnel selected for assignment to MAITs will meet the following criteria:

- (1) Possess technical skills, knowledge, and ability in their particular commodity or specialty areas.
- (2) Have a broad general knowledge in a related secondary logistics field.
- (3) Be qualifiable in instructional techniques and procedures.

h. MAIT personnel authorizations should provide sufficient spaces to maintain program continuity during periods of personnel turbulence.

i. Visits to units with specialized equipment (for example, aviation, medical, signal, missile) may require temporary addition of qualified personnel.

j. The MAIT personnel will be cleared for access to defense information according to AR 604-5. Clearance will be equal to the classification of the equipment and documents to be reviewed during the visits.

k. Responses to a request for A and I will be made by—

- (1) Telephone or electrical means.
- (2) Visit of selected personnel.
- (3) Visit of entire team.

l. MAIT visits are categorized as follows:

(1) Requested visits can be arranged by the unit commander requiring a MAIT or by commanders requesting a MAIT for subordinate units.

(2) Directed visits are scheduled in advance.

(3) Programmed visits are scheduled in advance.

m. Requested and directed visits will be given precedence over programmed visits.

n. To ensure effectiveness of the program, the MAIT chief will provide the commander of the unit to be visited with the guidance shown below. It should be stressed that a minimum of unit preparation is desired.

- (1) Key personnel are to be made available, including crews and operators who will receive A and I.
- (2) Materiel records and reports to support A and I are to be made available, but not formally displayed.
- (3) Unit personnel are to be made available as guides to accompany MAIT members to the A and I site.
- (4) Tools, equipment, and supplies needed for A and I are to be made available.
- (5) Equipment required for training during MAIT visits will be configured as needed. Formal layouts and displays are discouraged.

o. Procedures for the conduct of MAIT visits depend on the type of A and I to be provided. In providing responsive A and I to the unit in need, the MAIT will provide the following:

(1) A and I on materiel, records, procedures, and reports as requested or identified by the units or by higher headquarters.

(2) A and I, as determined by MAIT, through review of materiel, records, procedures, and reports.

p. The amount of materiel, records, and reports reviewed will be governed by the following:

(1) Unit commander's recommendation.

(2) Availability of materiel, records, and reports.

(3) Available time for both the MAIT and the unit visited.

q. Operators and unit maintenance personnel will evaluate selected materiel according to applicable technical publications. The records of results of individual evaluations will be prepared by unit personnel. A and I team members will supervise the materiel evaluations and provide assistance or instruction as needed.

r. Upon conclusion of the visit, the MAIT chief will—

(1) Conduct an informal review of the visit. Persons present for the review will include the commander of the unit visited and others selected by the commander. The critique should cover the total scope of the visit and include problem areas, remedial action initiated or recommended, and areas requiring followup.

(2) Prepare a visit summary.

(3) Discuss areas requiring external assistance with the unit commander. After this discussion, a separate letter will be prepared to describe problems that require outside assistance. The MAIT chief will submit this letter to the organization, headquarters, activity, or agency capable of taking action. The chief will also furnish a copy of the letter to the commander of the unit visited.

(4) Give a MAIT evaluation questionnaire to the unit commander.

s. The unit commander will assess the performance of individual team members and the quality of A and I provided. This will be done by completing the questionnaire provided by the MAIT chief.

t. The success of the MAIT Program depends largely on the quality of the A and I provided. To enhance the program it is essential that the MAIT capabilities be widely publicized. Suggested methods are flyers, daily bulletin notices, articles in local news media, referral cards, and briefings for newly assigned key personnel. Another effective method is to distribute a newsletter to supported units. Some of the subject areas that can be included in a newsletter are as follows:

(1) MAIT lessons learned.

(2) Logistics information of general interest.

(3) Solutions to common problems encountered by MAIT.

(4) Situations that require quick remedial action.

(5) Mobilization.

u. The primary duty of MAITs during mobilization is to augment the resources of the command or installation to which assigned. The teams will also develop the capability to perform the following tasks during mobilization and intensified buildup operations:

(1) Provide A and I in equipment pre-embarkation reviews. This includes validation of condition classification.

(2) Augment MACOM assistance team capabilities.

(3) Develop on-site training programs.

v. Team integrity should be retained, where possible, in order to further efficient return to peacetime operations.

w. Consideration will be given to the allocation of mobilization augmentees for assignment to MAITs.

x. Records and reports will be handled as follows:

(1) The MAITs will maintain a DA Form 5480-R (Maintenance Request and Assignment Register) of visits conducted. DA Form 5480-R will be locally reproduced on 8 1/2- by 11-inch paper. A copy for local reproduction purpose is located at the back of this regulation. All time expended by team members, including hours for responding to telephone requests, will be shown on the register. These data will be used to support requests for additional TDA spaces or to defend existing MAIT manning levels.

(2) A visit summary will be prepared after each visit. It will describe actions to be taken and problems that require

assistance of a support organization or higher headquarters. The number of copies prepared and the distribution of each type of visit summary will be as follows:

(a) *Requested visit.* Prepare three copies of the visit summary. One copy will be furnished to the commander of the unit visited, the requester, and the MAIT privileged information files.

(b) *Directed visit.* Prepare three copies of the visit summary. One copy will be furnished to the commander of the unit visited, the commander directing the visit, and the MAIT privileged information file.

(c) *Programmed visit.* Prepare two copies of the visit summary. One copy will be furnished to the commander of the unit visited and the MAIT privileged information file.

(3) The MAIT will provide a written report quarterly to the headquarters of the activity to which assigned. The report will contain personnel spaces authorized, personnel assigned, number of units visited/man-days expended, number of telephone inquiries completed, man-days lost to TDY or leave, number of unit requests not completed and reasons why, and suggestions for improvement of the MAIT program.

4-21. Repair parts supply (Class IX)

a. Repair parts allocation, stockage, and supply policies and procedures are contained in AR 710-2, AR 420-18, DA Pam 710-2-1, DA Pam 710-2-2 and associated automated systems technical manuals.

b. Recovery of reparable secondary materiel is controlled by AR 710-2.

Section IV

Contract Maintenance Support

4-22. Private enterprise

a. When the Army maintenance system cannot provide required support, the Army will rely on the competitive private enterprise system, both domestic and foreign.

b. The MACOMs will ensure that essential quality requirements for maintenance service contracts be defined, quantified, measured, and assessed during the contracted-out support process. Solicitations and contracts for maintenance services will require—

(1) Quantitative measures of quality and performance.

(2) Contractors to submit historical data that will show the capability to achieve these quantitative measures. These data are used in the solicitation review process.

(3) Specific contractual provisions for obtaining contractor conformance, such as award and incentive fee provisions for meeting performance quality, and cost standards.

(4) Test and evaluation to be performed to demonstrate performance, and corrective actions to be taken on deficiencies revealed.

c. Commanders contracting for commercial DS or GS level repair of equipment will ensure that these contracts include provisions for collection of DA Form 2407 or DA Form 5504 maintenance data from the contractor when cost effective. This data will be included in reports to the WOLF at LOGSA. When the cost effectiveness of data collection is questionable, such as for small, one-time contracts, the local commander will review the requirement and determine if the data will be collected.

4-23. Prohibitions

a. Maintenance by contract personnel is prohibited when—

(1) The maintenance workload to be performed is necessary for individual and unit training.

(2) A satisfactory commercial source is not available and cannot be developed in time to provide maintenance support when needed.

(3) Contract maintenance support will result in higher cost of maintenance support to the Army.

(4) The product or service is available from another DOD component or another Federal department or agency.

b. Restrictions are as follows:

(1) Contractor maintenance personnel will not be stationed permanently forward of the Corps rear boundary.

(2) Contractor maintenance personnel may travel forward of the Corps rear boundary on a case-by-case basis as individual equipment failures occur to provide temporary on-site maintenance.

4-24. Foreign enterprise limitations

a. Foreign private enterprise can be used only in the following situations:

(1) U.S. contractor or DOD sources lack the organic capacity to perform the task in the time required. In this situation, use of foreign private enterprise is interim in nature until U.S. capability can be developed or expanded.

(2) Use of foreign private enterprise has been predetermined by international agreement.

(3) The necessity for establishing an alternate foreign source has been determined formally by DOD as being in the best interests of U.S. strategic or tactical objectives.

- (4) Use of foreign private enterprise will not affect the development or maintenance of U.S. national capabilities.
- b.* The use of foreign contractual services will be contingent on U.S. contracting authority certification of quality, capability, and capacity.

4-25. Readiness of MTOE units

The use of contractual services to support readiness of MTOE units will be generally limited to short-term tasks—

- a.* Pending the attainment of a unit, DS, or GS organic capability or to allow for peak workloads of a transitory nature.
- b.* When required, programmed, and contracted by the materiel developer for an interim period to attain an earlier operational status for initial fielding of new military materiel.
- c.* For the completion of overhaul or modification of military materiel when—
- (1) The extent or complexity of the modification or modernization work to be accomplished requires the technical qualifications of the original manufacturer.
- (2) Repairing complex electronic devices that require long-term training for skill development and expensive stand alone test equipment.

4-26. Contingency plans

Contingency planners will consider the maintenance potential of facilities in overseas areas that may be operated under military control or by contractual arrangements with commercial sources.

4-27. Classified communications security

All proposals for contract maintenance support of classified communications security/signal intelligence (SIGINT) and electronic warfare (EW) equipment must undergo an assessment of risks to national security prior to using commercial maintenance sources. This special risk assessment must be conducted by the National Security Agency (NSA). The proposal, including performance work statements (PWS) with additional information identifying the COMSEC/SIGINT and EW equipment, density supported, and levels of maintenance to be performed, should be submitted through HQDA (DAMO-C4T), WASH DC 20310, to Director, National Security Agency, ATTN: S-04, Fort Meade, MD 20755. Classified equipment not under NSA cognizance being considered for maintenance support contracts to contractors other than original equipment manufacturers, will be given an assessment of risk as prescribed above. Approval by HQDA is required prior to contract award. In the event approval for solicitation is granted by NSA and/or HQDA, then the provisions of chapter 5, section 3 apply to further processing.

Section V

Interservice Maintenance Support

4-28. General

Interservice support agreements (ISAs) will be fully explored prior to the submission of requests through MACOMs to HQDA (DALO-SMM) for additional or expanded organic maintenance facilities. This includes modernization of tooling and materiel of non-MTOE support and depot level maintenance facilities. ISAs will be used to provide maintenance support services when—

- a.* This means is the least costly to the Government.
- b.* Materiel to be supported is common to the U.S. Army and another service.
- c.* The supporting agency or component has the available capability to render such support.
- d.* The provision of such support provides for a reduction in materiel not mission capable and/or provides the potential for reducing investment and operating support costs.

4-29. Exceptions

ISAs will not be used—

- a.* To document transfer of responsibility for a function or mission from one DOD component to another.
- b.* When an organic support capability and capacity for this service is required to sustain military readiness.

4-30. Personnel support

When another DOD component or Federal Government agency has the available capability with the exception of personnel, and the provision of the support is to the overall advantage of the Government, the matter will be referred to HQDA (DALO-SMM) for resolution prior to establishing duplicate facilities.

4-31. Reciprocal support

Upon request, the Army will provide maintenance support to other DOD components and Federal Government agencies

to the extent that its military requirements will permit, and available capabilities and capacities exist. This support will be executed at the lowest practicable command level.

4-32. Funding support

Each Army element is responsible for programming, budgeting, and funding to support the ISA to which it is a party. Whenever manpower or fund requirements exceed available resources, MACOM commanders will seek HQDA (DALO-SMM) approval.

4-33. Provisions of ISAs

ISAs will—

- a. Specify responsibilities for furnishing repair parts and other support materiel required for the completion of the maintenance operations. Normally, materiel is provided by the agency or component furnishing the service.
- b. Make suitable provisions for the interchange of maintenance performance and management data between all parties to the agreement.
- c. Contain provisions for review every 2 years to determine whether the agreement should be continued, modified, or terminated.

4-34. Transfer of resources

- a. The transfer of resources (personnel, funds, and materiel) resulting from the establishment, modification, or termination of local support agreements will be accomplished per existing Army and DOD procedures.
- b. Army agencies will provide interservice support on a reimbursable basis. Non-reimbursement arrangements are authorized for service provided in combat areas.

Section VI

Maintenance Programs

4-35. Chief of Staff, Army Award for Maintenance Excellence Program

a. Purpose and objectives.

(1) The Chief of Staff, Army Award for Maintenance Excellence (AAME) program is sponsored by the American Defense Preparedness Association (ADPA) on an annual (by fiscal year) basis and recognizes Total Army units/activities that demonstrate excellence in unit-level maintenance programs.

(2) The objectives of the AAME program are to improve and sustain unit maintenance readiness to evaluate the status of total unit maintenance operations; to recognize outstanding unit level accomplishments and initiatives; and to promote competition at MACOM, HQDA and DoD level.

(3) Although the AAME program evaluates unit level maintenance operations performed in compliance with the Army's standard maintenance policies and procedures, the evaluation areas also encompass many principles of Total Army Quality (TAQ) and support a unit's participation in TAQ programs. The AAME evaluation categories of readiness, maintenance management, maintenance training, and leadership/innovation correspond closely to TAQ evaluation criteria of business results, process management, human resources development, and leadership. Where applicable these corresponding TAQ criteria have been shown and incorporated to assist units in using their participation in the AAME program to support participation in other TAQ-based programs (e.g., the Army Communities of Excellence Program).

b. Responsibilities.

(1) The CSA, VCSA, and DCSLOG, or their designated representatives, will present trophies or plaques, provided by ADPA, to each of the units/activities that are selected as AAME winners and runners-up.

(2) The DCSLOG will—

- (a) Provide program funding guidance, policy and overall supervision of the program.
 - (b) Determine the most appropriate means of award presentation and coordinate the annual award ceremony.
- (3) MACOM commanders will—

(a) Promote competitions at all levels of command and develop awards to recognize units/activities participating in all levels of the competition process.

(b) Review Unit Maintenance Profile (UMP) packets submitted by subordinate organizations. Select those UMP packets to be nominated to the HQDA-level AAME competition in accordance with instructions and criteria in Appendix D.

(4) Cdrs TRADOC, CNGB, and CAR will provide board members for the HQDA evaluation process. Members are required for both the Phase I centralized board and Phase II on-site evaluations each year.

(5) The Cdr, USAOC&S will—

(a) Serve as executive agent for administration of the AAME Program. With HQDA (DALO-SMM), develop and coordinate updates and modifications to policy and administrative instructions, and developing, revising, and maintaining security of evaluation protocols used to select semi-finalists, runners-up and winners.

(b) Convene the HQDA evaluation board and on-site evaluation teams.
(6) Unit commanders (or equivalent) will conduct their programs within the guidelines established in this paragraph and in Appendix D.

c. Categories of competition.

(1) Units/activities will be nominated to compete in one of twelve categories. The categories are based upon the Army component of the unit, and the density of unit equipment.

(2) The four component competition areas are—

- (a) Active Army TOE/MTOE unit
- (b) Army National Guard (ARNG) TOE/MTOE unit
- (c) USAR TOE/MTOE unit
- (d) TDA unit (any component) equipment

(3) Within each of the four component competitions, units will compete in one of three categories, based on the amount of organic equipment (e.g., vehicles; weapons; protective masks; mess equipment; medical equipment; test, measurement and diagnostic equipment, tools, etc.) their unit level maintenance programs are required to support, as listed in the “authorized” column of the unit MTOE/TDA. Equipment maintained for other units/activities will be counted only if support agreements have been developed and are included in the UMP nomination package. The equipment density categories are—

- (a) Light density—50 to 600 total items of equipment
- (b) Intermediate density—601 to 1,500 total items of
- (c) Heavy density—More than 1,500 total items of equipment

d. Competition restrictions.

(1) Nominations will be accepted from the following MACOMs:

- (a) Eighth U.S. Army
- (b) U.S. Army, Europe, and Seventh Army
- (c) U.S. Army Forces Command
- (d) U.S. Army Pacific
- (e) U.S. Army South
- (f) National Guard Bureau
- (g) U.S. Army Intelligence and Security Command
- (h) U.S. Army Medical Command
- (i) U.S. Army Information Systems Command
- (j) U.S. Army Materiel Command
- (k) U.S. Army Military District of Washington
- (l) U.S. Army Military Traffic Management
- (m) U.S. Army Special Operations Command
- (n) U.S. Army Training and Doctrine Command
- (o) U.S. Army Criminal Investigations Command
- (p) U.S. Army Corps of Engineers
- (q) U.S. Army Space Command

(2) The number of nominations which may be submitted by a MACOM are limited.

(a) Each Active Army MACOM may submit 3 nominations for the Active Army TOE/MTOE competition: 1 light, 1 intermediate and 1 heavy equipment density unit.

(b) FORSCOM may submit 9 nominations for the USAR TOE/MTOE competition: 3 light, 3 intermediate and 3 heavy equipment density units. All other MACOMs with USAR units may submit 3 nominations for the USAR TOE/MTOE competition: 1 light, 1 intermediate, and 1 heavy equipment density unit.

(c) The NGB may submit 9 nominations for the ARNG TOE/MTOE competition: 3 light, 3 intermediate and 3 heavy equipment density units.

(d) Each MACOM may submit 3 nominations for the TDA competition: 1 light, 1 intermediate and 1 heavy equipment density unit/activity.

(3) The program is designed to evaluate unit level maintenance operations at brigade, battalion, company, battery, troop and equivalent MTOE/TDA organizations. However, parent units (e.g., brigade, battalion) who compete must address all subordinate elements in their UMP nomination packages.

(4) With the approval of the responsible MACOM commander, detachments that meet all other requirements of this regulation and are assigned unit maintenance functions may compete. Detachments, teams, or other elements that are temporarily separated from the parent organization will compete as part of their parent unit and not as a separate entity.

(5) Units that have experienced effective date changes to their MTOE or TDA during the competitive FY will be evaluated on the MTOE/TDA under which they were organized for the greatest part of the year. Commanders should note MTOE/TOE changes in their comments.

e. Submission of nomination packages.

(1) Instructions for preparing and submitting the Unit Maintenance Profile nomination package are listed in Appendix D.

(2) Units will submit UMP packets through command channels to their appropriate MACOM.

(3) MACOMs will review and select those UMP packets to be nominated to the HQDA-level AAME competition in accordance with instructions and criteria in Appendix D. MACOMs will then endorse and forward the original UMP packets for each unit/activity nominated to arrive at the USAOC&S not later than 15 December following the fiscal year of competition.

(4) Submission of nomination packages to the USAOC&S constitutes consent for an on-site evaluation of the unit's maintenance program.

f. HQDA evaluation process.

(1) Phase I: Evaluation of UMP nomination packages.

(a) USAOC&S will convene an evaluation board and appoint an appropriate chairperson.

(b) The board members will be drawn from TRADOC service schools, OCAR, NGB, and other special activities. Members will have both a proven performance record and expertise in unit-level maintenance. Personnel will be in the grades of master sergeant through sergeant major, chief warrant officer through master warrant officer, and captain through lieutenant colonel or civilian equivalent.

(c) Phase I evaluation guidelines and scoring criteria will be developed by USAOC&S. The board will evaluate the UMP nomination packages and select three semi-finalists in each of the twelve competition categories.

(2) Phase II: On-site evaluations of semi-finalists.

(a) USAOC&S will appoint four on-site evaluation teams: Active TOE/MTOE, ARNG TOE/MTOE, USAR TOE/MTOE and TDA.

(b) The team members will be selected from TRADOC schools, OCAR, NGB, and other special activities. If possible, members will be selected from the Phase I evaluation board or have previous experience in conducting AAME on-site evaluations.

(c) Using the Phase II evaluation guidelines/scoring criteria, the on-site teams will evaluate each semi-finalist unit.

(3) The Phase I and II results will be combined to determine the winner and runner-up in each of the 12 competition categories. The final score is a combined score of both Phase I (30 percent of the final score total) and Phase II (70 percent of the final score total) results.

(4) HQDA (DALO-SMM) will notify the winners/runners-up by message as soon as possible after Phase II completion.

(5) The USAOC&S, ATSL-AAME, will compile and forward to each MACOM lessons learned from the UMP nominations not selected as semi-finalists. Lessons learned will be discussed at the annual maintenance award program IPR.

g. Publicity.

(1) To enhance its recognition value, all levels of command should aggressively publicize the AAME program winners. This may be accomplished through public affairs officers and may include announcements of winners in local newspapers; hometown news releases; and background information about the Army-wide aspects of the AAME program and its positive impact on unit level maintenance status.

(2) The ADPA should receive appropriate recognition in any publicity for its sponsorship of the AAME program.

(3) The USAOC&S will ensure that its Public Affairs Office is continually apprised of AAME events and achievements.

(4) Commanders will submit publicity information and photographs for historical purposes to the Commander, U.S. Army Ordnance Center and School, ATTN: ATSL-AAME, Aberdeen Proving Ground, MD 21005-5201.

h. Program Milestones.

(1) HQDA and USAOC&S program guidance updates-1 Oct (when necessary)

(2) Request for DA evaluation board members-1 Nov each year

(3) DA Phase I Evaluation Board-Jan each year

(4) DA On-Site Phase II Team visits-Feb/Mar each year

(5) Army Awards Presentation-NLT 90 days following announcement of winners/runners-up

(6) PS Magazine and public affairs articles-As required

Light units support 50-600 items of equipment

Intermediate units support 601-1500 items of equipment

Heavy units support 1500+items of equipment

4-35.1. Secretary of Defense Maintenance Award Program

a. The Secretary of Defense Maintenance Awards Program annually recognizes six units selected from among all

Services who have demonstrated the most significant maintenance achievements in mission support and maintenance accomplishments within DoD. Additionally, one of the six units is selected as the best overall, and is awarded the Secretary of Defense Phoenix trophy. The DOD Maintenance Awards Program is conducted in association with the ADPA, and the publicity restrictions outlined in paragraph 4-35g(2) above apply.

b. The Secretary of Defense Maintenance Award is an impact award which recognizes maintenance excellence performed during high-intensity missions in demanding environments. Each service may nominate 2 units in each of the 3 categories: small (25–300 authorized personnel), medium (301–999 authorized personnel), and large (1000+ authorized personnel). In order to compete, units must have operated under the authorized structure for at least one half of the competition.

c. Any MTOE/TDA combat arms, combat support or combat service support unit that performs unit, DS, or GS level maintenance can be nominated by MACOMs to HQDA to compete in the Secretary of Defense Maintenance Awards Program. This program evaluates units based on four criteria: mission accomplishments, effective use of maintenance resources, innovative management accomplishments, and personnel quality of life programs. The Secretary of Defense Maintenance Awards selection process does not include an on-site evaluation. The entire award score is based on a centralized board evaluation of the nomination packet which includes the basic information sheet (figure 4-1), a summary of actions covering the four evaluation criteria, a written award citation, and command endorsements. The three finalists for the Phoenix Trophy may include an on-site visit by an OSD (MI&L) team.

d. MACOM nominations will be processed by an evaluation board conducted separately from the AAME evaluation and convened in January of each year by the Program Executive Agent, the Commander, USAOC&S. The board will be co-chaired by HQDA (DALO-SMM). MACOM nomination packets should be submitted by registered mail to Commander, U.S. Army Ordnance Center and School (USAOC&S), ATTN: ATSL-AAME, Aberdeen Proving Ground, MD 21005-5201. Nomination packets should be submitted in hard-copy and in an IBM compatible disk format, preferably Word Perfect. Packets should arrive NLT 15 December each year. MACOMs may submit units for both the AAME and the DoD competitions.

e. Detailed instructions for preparing the Secretary of Defense Maintenance Awards nomination packet can be found in DoD Directive 1348.30, Secretary of Defense Maintenance Awards Program. MACOM nomination packets must include the basic information, the summary of actions, and the award citation. The summary of actions should include a comprehensive narrative on each of the following areas:

(1) Mission Accomplishments. Accomplishments should stress maintenance efforts and the impacts of those efforts on the unit's or supported unit's operational capability and mission accomplishment.

(2) Effective Use of Maintenance Resources. Descriptions of the competing unit's accomplishments which illustrate good stewardship of maintenance resources.

(3) Innovative Management Accomplishments. Descriptions of maintenance management actions taken within the competing unit to improve the unit's mission capability.

(4) Personnel Quality of Life Programs. Descriptions of programs or actions aimed at improving motivation or morale of maintenance personnel.

f. Units are encouraged to include color photos which clearly depict the Summary of Actions.

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1. Service: (i.e., United States Army)
 2. Specific unit designation of nominated unit:
 3. Category/Unit size of nominated unit: (i.e., Large/401 authorized personnel);
 4. Point of Contact at nominated units should include primary and alternate numbers with name, phone (commercial) and DSN number. (If the unit is deployed, provide a telephone number for access to the nominee POC.
 5. Military Department points of contact should include the name, phone (commercial), DSN and FAX numbers. (completed by HQDA)
 6. Complete mailing address of the nominated unit and its higher headquarters. (Include the appropriate office symbol and the attention POC.)
 7. Complete electronic message address of the nominated unit and its higher headquarters. (This is the Automatic Digital Network address, not the E-mail address.)
 8. Background information for nominated unit should include unit size and location (category) for officers and enlisted.
 9. Unit mission statement: (Not to exceed five lines).
 10. Operational chronology (during award period 1 October to 30 September of the following year), of significant operational events, deployments and major training exercises should include operation, location and dates.

Figure 4-1. Basic Information Sheet

4-36. Army Oil Analysis Program (AOAP)

The objectives of the AOAP are to improve operational readiness of Army equipment, promote safety, detect impending component failures, and conserve lubricating and hydraulic oils by applying on-condition oil changes.

a. The CG, AMC is the executive agent for the AOAP. Approval of all policy pertaining to the AOAP rests with the DCSLOG. In addition, the CG, AMC will—

- (1) Exercise program management over the AOAP.
- (2) Ensure that the U.S. Army Aviation and Troop Command (ATCOM), as the AOAP equipment manager, funds and procures laboratory equipment.
- (3) Ensure that AMC major subordinate commands—
 - (a) Recommend systems for inclusion in the AOAP and sampling intervals for these systems.
 - (b) Configure systems to use oil sampling valves where feasible.
- (4) Provide the DA Program Director, Army Oil Analysis Program, who will—
 - (a) Provide management guidance, technical supervision, and assistance to all Army activities regarding the AOAP.
 - (b) Conduct annual unannounced laboratory assistance and assessment review (LAAR) visits to monitor laboratory operations.
 - (c) Serve as the functional manager for the AOAP Standard Data System, as prescribed in AR 25-3 and DA Pam 25-6.
 - (d) Serve as the executive agent of the depot oil analysis program.

- (e) Ensure compliance with the Joint Oil Analysis Program (JOAP) as specified in AR 700-132.
 - (f) Approve weapon systems and end items recommended for inclusion in the AOAP.
 - (g) Approve sampling intervals.
 - (h) Develop and maintain component wear-metal evaluation criteria for systems in the AOAP; ensures that criteria are published in the proper laboratory technical manuals.
 - (i) Plan and coordinate research and development to improve oil analysis techniques.
 - (j) Prepares and update the AOAP 5-Year Program Plan (RCS CSGLD-1944). Coordinate resources prior to redistribution of workload.
 - (k) Develop and maintain a prototype performance work statement for use in solicitation documents for the contract operation of AOAP laboratories. The program director will also assist in the review of contractor bids and proposals and evaluate the qualifications of contractor personnel to satisfy the terms of the contract.
 - (l) In coordination with the Joint Oil Analysis Program, Technical Support Center (JOAP-TSC), ensure that the procedures prescribed in the JOAP laboratory manual regarding certification of equipment and personnel are compatible with established requirements for AOAP laboratories.
 - (m) Ensure that all AOAP laboratories meet and maintain requirements for certification prescribed in the AOAP laboratory manual.
 - (n) Serve as technical adviser for the assembly and operation of mobile oil analysis laboratory facilities.
- b. MACOM commanders will—
- (1) Ensure that all subordinate commands participate in the AOAP.
 - (2) Establish oil analysis laboratories in coordination with the AOAP director.
 - (3) Fund the operation of laboratories.
 - (4) Ensure standard statement of work is used in solicitation documents for the contractor operation of AOAP laboratories.
- c. The CG, TRADOC, is responsible for developing and incorporating AOAP instructions into all appropriate service schools' programs of instruction.
- d. The following policies apply to the AOAP:
- (1) The AOAP is mandatory at all levels of maintenance operations for specified materiel, including overhaul for QA purposes.
 - (2) All Army aircraft and those systems identified in DA Pam 738-750, chapter 4, will be enrolled in the AOAP. Additions or deletions must be approved in writing, by the AOAP Director.
 - (3) The AOAP will be executed between the laboratory and the user unit.
 - (4) The lubricating and hydraulic oils from all components enrolled in the program will be evaluated by the servicing AOAP laboratories. Intervals are specified in DA Pam 738-750, chapter 4, TB 43-0106, or, upon notification, by the servicing AOAP laboratory.
 - (5) Upon receipt of a DA Form 3254-R (Oil Analysis, Recommendation, and Feedback) issued by the AOAP laboratory, the unit commander will place the equipment in a not mission capable maintenance status until the maintenance action is completed. To ensure safety of flight, an aircraft may be placed in a not mission capable status before formal receipt of a DA Form 3254-R.
 - (6) All units and levels of command will have an AOAP monitor who is adequately trained by the supporting lab or installation AOAP monitor.
 - (7) Each AOAP laboratory will provide oil analysis support per applicable publications and supplemental guidance provided by the program director.
 - (8) Oil sample valves will be installed on all vehicles and equipment enrolled in AOAP as specified by the materiel proponent. GS and depot activities will install sample valves during overhaul and repair of assemblies as needed.
 - (9) During wartime, AOAP priority will be given to aeronautical items.
 - (10) During the transition to war AOAP support will be provided by fixed labs and mobile or portable systems as they are available.
 - (11) During wartime, AOAP service will be—
 - (a) Provided as far forward as possible using the most responsive system available.
 - (b) Event oriented, occurring during unit stand downs, reconstitutions, and the conduct of DS and GS levels of maintenance.
 - (12) Direct communication between the AOAP program director and the various command operating elements and laboratories is authorized. Correspondence will be sent to the Commander, USAMC Logistics Support Activity, ATTN: AMXLS-LAP, Redstone Arsenal, AL 35898-7466.
- e. The establishment and refinement of normal and abnormal wear metal concentration patterns is completely dependent on correlation of analytical data with actual conditions found at disassembly inspections. Feedback to the laboratory is essential to refine evaluation criteria, to increase the accuracy of laboratory predictions, and to recommend design changes in those major assemblies showing an abnormal failure rate through the AOAP. Therefore, operating and maintenance activities must furnish maintenance and disassembly inspection data to the AOAP laboratories

regarding engines or other major assemblies. The procedures for furnishing feedback are contained in DA Pam 738-750 and TB 43-0106.

f. Detailed operating procedures for the AOAP are contained in DA Pam 738-750 and TB 43-0106.

g. Interservice support is provided according to AR 700-132.

4-37. Army warranty program

a. Materiel under warranty will be identified and maintained per the detailed policies and guidance contained in AR 700-139.

b. Warranty actions will be completed as directed in AR 700-139 and reported under DA Pam 738-750 and DA Pam 738-751.

c. Unit readiness and mission effectiveness will take priority over warranty actions. The supporting warranty coordinator (WARCO) will be notified immediately when equipment must be fixed first and the warranty settled later.

d. Application of the AOAP to items under warranty is specified in the item's warranty technical bulletin. AOAP procedures supplement the instructions directing oil changes for equipment under warranty.

e. Representatives of the Logistics Assistance Program will provide advice and assistance to MACOM WARCO and personnel at unit, DS, and GS levels of maintenance.

f. Manufacturer's standard warranties will be accepted when items are locally procured. Special warranties will be included in local purchases only when they are cost-effective and executable by the user.

4-38. Sample data collection (SDC)

a. Objectives and purpose.

(1) The SDC program is established per DOD 4151.18 to improve weapon system performance, logistics supportability, and maintainability, and to support ARSTAF programs. It is an integrated, closed loop field data collection and management system authorized by DA. Under the program, maintenance and logistics data are collected through onsite observation of a sample number of designated end items operating in selected units for specified periods of time. Dedicated personnel collect the data in a manner determined by each SDC proponent.

(2) Analysis of SDC information provides an assessment of equipment supportability and performance to support initiatives relating to manpower and personnel integration (MANPRINT), safety, design improvements, production processes, MWOs, supply, maintenance, manpower requirements criteria, engineering evaluation, and operating support cost reduction. The SDC program establishes an audit trail to conduct quality assurance per AR 702-3.

b. Program policies.

(1) USAMC LOGSA is the DA/AMC executive agent for SDC and will—

(a) Receive guidance and direction from DA DCSLOG.

(b) Assume full AMC responsibility for administering the program.

(c) Develop and executes policy guidance.

(d) Conduct evaluations at the MACOM, proponent, and participating unit levels to assess operations and evaluate compliance with regulatory guidance.

(e) Provide assistance, as required, in all aspects of the SDC program.

(2) The SDC controls apply to all DA activities soliciting materiel system field performance information from the Army user, except TAMMS data collected under DA Pam 738-751 (TAMMS-Aviation). All requirements for data collection on fielded equipment in the hands of the user will be approved by DCSLOG through the DA/AMC executive Agent. The AMC MSC with equipment proponentcy is designated the SDC proponent for conventional projects and special field information tasks (SFIT). The AMSAA is the SDC proponent for all Field Exercise Data Collection (FEDC). All SDC projects are managed and executed by the applicable SDC proponent.

(3) Any difference between MACOMs relative to roles and responsibilities involved in individual SDC projects resolved by DCSLOG.

(4) The SDC empirical data is a mandatory source of information for materiel proponents to use when providing information required by functional and staff elements.

c. Types and methods of SDC.

(1) There are three types of SDC, as follows:

(a) Conventional SDC encompasses specific equipment end items and is comprised of mandatory and discretionary projects. Mandatory SDC projects are directed by DCSLOG and are funded utilizing applicable PM funding. Discretionary projects are selected by the equipment proponent. When properly justified, any activity requiring data may request that the SDC proponent establish a discretionary SDC project. Discretionary projects are normally funded by the activity identifying the need for information. All conventional projects have a duration of 3 years, unless extended or terminated by DA.

(b) The SFITs are short term in nature (1 year or less) and are designed to support PEO, PM, and MSC requirements that do not dictate a full-scale SDC project. The SFITs may also be used to augment selected ARSTAF objectives but cannot duplicate other ongoing efforts. An activity having a need for materiel system field performance

data may request a SFIT through the SDC program. The SFITs are normally funded by the requesting activity (PM or equipment proponent).

(c) The FEDC encompasses collection of maintenance and operational data on mission essential end items, normally Equipment Readiness Code A, as defined in AR 220-1 during selected major field training exercises (FTX). The DA-approved FEDC projects have a duration of 3 years, unless extended or terminated by DA.

(2) The three methods or levels of data collection are listed below. They are authorized commensurate with information required, objectives to be achieved, and cost considerations. The data collection method to be selected is outlined in the field procedures guide (FPG) and is the one most cost effective but least disruptive of field operation, while still accomplishing the objectives of the SDC effort.

(a) *Level 1.* Owning and support personnel will allow SDC data collectors to review/copy standard DA forms. Additional data elements, as required, will be recorded by owning unit and support personnel on standard DA forms or on DA approved specially designed forms. Completion of specially designed SDC forms by unit/support personnel is restricted to an absolute minimum and requires strong justification. The SDC proponent representatives will collect DA modified/specially designed forms, perform quality checks, transcribe data to specially designed forms as required, reduce data if required, and forward forms/reduced data to a designated site.

(b) *Level 2.* Owning unit and support personnel will allow SDC data collectors to review/copy standard DA forms. Additional data elements, however, will be collected by SDC proponent agency representatives verbally and through direct observation of owning and support units. The SDC proponent representatives will collect standard DA forms, perform quality checks, transcribe data to specially designed forms, reduce data, if required, and forward forms/reduced data to a designated site. No additional reporting burden will be placed on participating field units.

(c) *Level 3.* This data collection method is highly detailed in nature and is associated with data collection during intensive usage scenarios in which highly complex reliability, availability, and maintainability data, to include data reported through various standard Army systems, will be collected by SDC proponent representatives. No additional reporting burden will be placed on field units. Examples of this method include follow-on evaluations, Lead the Fleet, and Fleet Leader Programs. This method will only be utilized when properly justified to accomplish complex requirements. The FEDC is not under this level.

d. Planning, programming, and budgeting for SDC.

(1) Requirements for SDC to be conducted on each weapon system/equipment are addressed in the individual Materiel Fielding Plan (MFP), per DA Pam 700-142. The MACOM concurrence with SDC concept, defined in the MFP, will be formally conveyed through the signed materiel fielding agreement. The ILS manager will input SDC funding milestone No. 2023, 3008, and 3573 into the Army Milestone Management System (AMMS), per DA Pam 700-26.

(2) A list of Army systems designated by DA as intensively managed, of high interest, or significantly mission critical will be obtained and maintained by DCSLOG. The list will be forwarded to LOGSA at least 13 months prior to the beginning of the fiscal year for which it applies. The LOGSA will coordinate the list of intensively managed items with the SDC proponents for determination of applicability for mandatory status and feasible implementation dates. The proponents can recommend additional systems for mandatory status, based on their knowledge of problems or special concern relating to the systems/items.

(3) The list of items recommended for mandatory status, to include funding requirements, will be forwarded by LOGSA to DCSLOG at least 11 months prior to the beginning of the fiscal year for which it applies. DCSLOG reviews the list and forwards to the ASARDA for approval. This list of approved mandatory projects will be forwarded by LOGSA to the SDC proponents and by ASARDA through PEO channels to the PMs. The SDC proponents and PMs should receive the approved list at least 9 months prior to the beginning of the fiscal year for which the list applies. The list will be used to plan for SDC. If funding constraints, slippage in fielding dates, etc., preclude projects from being implemented in the year designated by the mandatory list, the projects will be scheduled for the appropriate year.

(4) Project/program managers will plan and program for procurement appropriation (PA) funds to support mandatory SDC projects and applicable discretionary SDC projects under their purview. Items, estimated cost, timeframes, etc., will be developed in coordination with the SDC proponent. Funding requests cover the duration of the project and will be forwarded through the annual budget process as far in advance as possible. Funds should be identified to the SDC program and transferred per the appropriate AR.

(5) SDC proponents may select additional items/systems for discretionary SDC. SDC proponents will request Operation and Maintenance, Army (OMA) funds through the annual budget process to support discretionary projects that they plan to initiate.

(6) A 5-year plan of projected project starts, extensions, terminations, and changes will be maintained by LOGSA, in coordination with the SDC proponents. The PMs will provide input for the plan to the SDC proponents, as requested. The 5-year plan will be provided annually to all MACOMs and interested organizations for use in planning. Change in fielding dates, unit size/location, availability of funds, etc., result in continual changes to the plan, particularly in the outyears.

(7) Commanders/directors of other interested units or activities (materiel development, combat, testing, training, and

system analysis organizations) will participate in the planning and implementation of SDC projects as requested. They should further identify any anticipated unique SDC reporting requirements.

(8) Mandatory SDC projects will be reviewed annually by DCSLOG for appropriate system coverage, compliance with the approved objectives, and conformance to policy.

(9) The LOGSA will produce and distribute an annual DA SDC program summary not later than (NLT) 60 days after the end of the fiscal year. The MACOMs, SDC proponents, and other organizations, when requested, will provide input to the annual DA SDC program summary NLT 30 days following the end of the fiscal year. The SDC proponents will conduct an annual cost benefit validation and provide the results as part of their input.

(10) A worldwide conference will be hosted annually by LOGSA to review program status, resolve problems, and plan for the future of the program.

e. SDC Documentation. The following SDC documentation will be prepared by the SDC proponent for each SDC project to be initiated:

(1) *Nonconventional SDC.*

(a) SFIT: A letter of justification is required for each project.

(b) FEDC: A memorandum of agreement between USAMSAA, LOGSA, and the participating MACOM is required for FEDC projects.

(2) *Conventional SDC.*

(a) The SDC plan is a planning document to identify resources; sampling methodology; purpose, objectives, and benefits (in general statement format); type of SDC project; project duration; cost and type of funding; identity/description of the end item; identification of the participating units and support units, including posts, camps, or stations; collection method and data elements, distribution list for output products; and support required from field MACOMs.

(b) The SDC FPG identifies SDC responsibilities for proponent agency representatives and commanders of selected units, and provides data collection procedures, forms preparation, and disposition instructions to participating units and/or SDC proponent agency representatives.

f. Implementation, changes, extensions, and termination of SDC projects.

(1) The SDC proponents will initiate mandatory SDC projects in compliance with ASARC/DAB II direction.

(2) The MACOMs will approve units nominated to participate in SDC efforts. The LOGSA will coordinate with the MACOMs on units/locations/dates/POCs for implementation at the earliest point possible in the planning process.

(3) The executive agent approves all conventional and non-conventional SDC project implementations, extensions, and terminations.

(4) The proponent agency implementing an SDC project used by more than one service will coordinate the documentation with the other using services, as appropriate.

(5) The SDC proponent will coordinate implementation requests, to include the plan and the FPG, with the DA/AMC executive agent NLT 150 days from the scheduled implementation date. The SDC implementation requests will include the purpose of the project; unit identification code(s) of the participating unit(s); timeframe; and the identity, social security number, and security clearance of those individuals who will implement the SDC effort. The SDC proponent will forward an information copy of the request to the participating MACOM to facilitate advance planning.

(6) The LOGSA will review the implementation request and required documentation and forward them to the participating MACOM at least 120 days prior to project implementation.

(7) The MACOMs will review SDC project requests and documentation on mandatory, discretionary, and SFIT SDC project implementations and identify additional data and report requirements, as applicable. They also will coordinate with the applicable units.

(8) Field MACOMs will establish and implement procedures to provide SDC project approval, as applicable, to include POCs and visit authorization clearances for AMC SDC implementations. Approvals will be provided to the executive agent, for further dissemination to the SDC proponent NLT 45 days prior to the scheduled implementation date.

(9) The MACOMs will assist SDC proponents in conducting their inventory of the equipment to be sampled. The MACOMs will ensure field units follow provisions of the field procedures guide (FPG), as it pertains to the participating and support units.

(10) Units will provide assistance and cooperation needed to obtain the required data. In particular, that data recorded per DA Pam 738-750 will be made available to the data collectors. Units will ensure that modified TAMMS and unique SDC forms are completed per the SDC FPG by unit personnel, when the MACOM approves the SDC plan and SDC FPG for a Level 1 method of data collection.

(11) Units will coordinate with any installation/in-country contracting officer representative (COR), as required.

(12) A change in participating units at new or existing locations for ongoing SDC projects must be justified by the SDC proponent. Requests will be staffed through the executive agent with the participating MACOM at least 110 days prior to change of unit.

(13) Requests for extension will be forwarded by the SDC proponent to the participating field MACOM with copy

furnished the DA/AMC executive agent NLT 110 days prior to the scheduled termination date. Field MACOMs will provide a response to the DA/AMC executive agent NLT 60 days prior to the scheduled termination date. The DA/AMC executive agent will coordinate the final approval with the SDC proponent and DCSLOG. The DCSLOG will provide final approval. The SFITs cannot be extended past 1 year.

(14) Projects will be terminated when objectives have been met. Termination notices will be forwarded by the SDC proponent to the participating field MACOM(s) with copy furnished to the DA/AMC executive agency at least 30 days prior to scheduled termination. The DA/AMC executive agent will coordinate the response with the SDC proponent and DCSLOG. The DCSLOG will provide final approval.

(15) It is very important that the leadtimes established to coordinate the SDC documentation be met, in order for all parties to have time to complete necessary actions. If required to meet these deadlines, facsimile, electronic mail, or overnight express mail should be considered. Exceptions to the leadtimes should be rare and must be coordinated with the DA/AMC executive agent.

g. The SDC data.

(1) The SDC information will be provided to all command levels requiring it. The SDC information is consolidated for user feedback, logistic management, and engineering purposes. The SDC narrative evaluation reports will be treated as field inquiries for response to the applicable SDC office.

(2) The SDC proponents will provide periodic feedback information to participating SDC units and, where feasible, to units having similar equipment.

(3) Reports for each SDC effort will be published and distributed annually to the addresses identified in the SDC plan. A final report will be developed NLT 90 days after completion of the SDC project.

4-39. Maintenance float

a. There are two types of maintenance float, repair cycle float (RCF) and operational readiness float (ORF).

b. RCF is an authorized quantity of assets which are to be utilized by the NICP to replace like items turned in by the owning unit for a planned depot repair program. Procedures to account, manage, and issue RCF items will be in AR 710-1. The NICP may issue RCF assets to fill MTOE/MTDA or ORF shortages when other assets are not available.

c. ORF is an authorized quantity of assets for use by units with a DS/AVIM level maintenance mission to exchange with supported units when repairs cannot be accomplished within MACOM established guidelines. ORF assets awaiting issue will be maintained at the maintenance standard defined in paragraph 3-1a.

(1) During peacetime, ORF is designed to assist in maintaining the readiness and operational posture of units.

(2) During transition to hostilities:

(a) Units deploying before the outbreak of hostilities will deploy with unit allocated ORF equipment from the installation. The unit allocation will be by LIN, and will be the ratio of each unit's equipment to the total of equipment supported by the installation from which the unit is deploying.

(b) Upon the outbreak of hostilities, non-deployed MACOMs will utilize ORF to enhance equipment readiness and fill shortages. Any excess ORF will be reported to HQDA (ODCSOPS) for redistribution guidance. Deployed MACOMs will do the same, except they will use any excess ORF to fill initial battle losses.

(c) Units deploying to support peacekeeping, humanitarian aid, or disaster relief efforts have the option to deploy their authorized ORF assets with permission of their MACOM.

d. To be eligible for consideration as a DA maintenance float, an item must meet the following criteria:

(1) Have a standard study number (SSN).

(2) Be Class VII or Class II.

(3) Be authorized maintenance support at the DS/AVIM level, except for the following:

(a) ORF may be maintained at TRADOC schools and training centers when approved by CG, TRADOC.

(b) ORF may be maintained at TDA and USAISC off-sight maintenance activities if they are not collocated with an MTOE DS maintenance unit. The MACOM commander's approval is required.

(c) ORF authorized a Light Infantry Division (LID) will be separately identified and accounted for on the division level Standard Property Book System (SPBS) and may be stocked regardless of capability to perform DS maintenance on the item.

e. Those items with established eligibility must also fall into one of the following categories:

(1) Category I: Items on the DA critical items list, and items directed by ODCSOPS to have an ORF. These items will be reviewed at the discretion of HQDA.

(2) Category II: Items which are readiness reportable per AR 700-138 but are not Category I. Repeated low demand data will be cause for removal from ORF authorization unless retention can be justified by the requesting MACOM.

(3) Category III: Items which are not readiness reportable, but which are embedded in and directly affect the readiness of Category I and II items.

(4) Category IV: Low density or obsolete items.

f. ORF assets will only be issued when the priority designator (PD) on the work order is 01 through 06, and the estimated repair time exceeds the MACOM established time criteria.

- (1) The decision to issue an ORF asset will normally be made by the IMMO, maintenance officer, or the AVIM production control officer. The decision will be made as rapidly as possible to ensure maximum mission capability.
- (2) Supported units will accept the ORF item to be issued as long as it is a like item or an authorized substitute per SB 700-20 and it meets the Army maintenance standard in paragraph 3-1a
- (3) The exchange of an unserviceable reparable end item for an ORF asset will be accomplished as a simultaneous turn-in and issue transaction. BII and COEI common to the end items will not be exchanged.
- (4) The priority for work requests to repair an unserviceable ORF asset, and requisitions to replenish washed-out assets, will be the highest priority authorized for use by customer units supported.
- (5) Each time a decision is made to float (whether assets are available or not), a demand for ORF will be recorded. A cumulative total of demands and issues will be maintained to support the annual utilization report. (refer to table 4-1).
- g. ORF assets will not be used to:
 - (1) Provide a source of repair parts (controlled exchange or cannibalization).
 - (2) Expand currently assigned missions or set up new operational mission.
 - (3) Replace items that have been cannibalized during peacetime.
 - (4) Satisfy temporary loan requirements.
 - (5) Set up a peacetime pool of equipment to be held as assets to reconstitute the force.
 - (6) Fill unit equipment shortages.
 - (7) Replace uneconomically reparable equipment.
- h. Specific ORF responsibilities are as follows:
 - (1) The DCSLOG will—
 - (a) DALO-SMM will approve requests for additions or deletions to the maintenance float support list and all new or revised float factors and notify AMC of any changes.
 - (b) Coordinate with ODCSOPS on approval of new ORF candidates and redistribution of unauthorized or excess ORF equipment.
 - (c) Approve and publish the ORF support list by 1 Oct each year.
 - (d) Furnish AMC approved float factors for publication in the TAEDP cycle.
 - (2) The ODCSOPS will—
 - (a) Include the maintenance float in the computations for the Army Acquisition Objective (AAO) using the approved factors from the TAEDP.
 - (b) Coordinate with ODCSLOG to redistribute ORF identified as excess or not authorized.
 - (3) Materiel developers (ASARDA (PMs/PEOs) and AMC) will:
 - (a) Ensure that maintenance float requirements established for equipment being fielded are based on wage data for similar items or best available engineering data.
 - (b) Coordinate with ODCSOPS, TRADOC, and MACOMs to ensure that maintenance float is properly documented and authorized at MACOM level in conjunction with materiel fielding plan development.
 - (4) CG, AMC will—
 - (a) Review recommendations for additions/deletions to maintenance float and develop and submit the proposed ORF support list with float factors to HQDA for approval by 15 August each year.
 - (b) Compute total ORF authorization for DA approval.
 - (c) Validate ORF authorizations in the requisition-validation (REQ-VAL) system against the TAEDP authorizations. The total of ORF on-hand plus on requisition will not exceed the TAEDP authorization.
 - (d) Re-compute float factors annually, as required, based on wage data reported by MACOMs or HQDA guidance.
 - (e) Publish approved authorizations in the TAEDP.
 - (f) Publish approved float factors in SB 710-1-1.
 - (5) MACOM commanders, CNGB, and CAR will:
 - (a) Approve the establishment of ORF and appoint a float coordinator.
 - (b) Distribute ORF within the command.
 - (c) Establish repair time criteria to be used as the basis for issue of ORF assets.
 - (d) Determine the minimum quantity of ORF required to meet their needs and ensure that ORF on-hand and on requisition does not exceed the TAEDP authorization.
 - (e) Report the preview calendar year demand data for ORF by 15 May to the U.S. AMC Logistics Support Activity, ATTN: AMXLS-RB, Redstone Arsenal, AL 35898-7466. The format for the report is at table 4-1.
 - (f) Report any excess or unauthorized ORF assets to HQDA (DALO-SMM) for disposition instruction. Excess includes ORF assets on hand with no utilization during one reporting period. Excess will be distributed as directed by HQDA.
 - (g) Recommend additions or deletions to the ORF support list throughout the year. These recommendations, with supporting justifications will be forwarded to LOGSA.

- (6) The accountable officer will—
 - (a) Account for ORF assets per AR 710–2 and DA Pam 710–2–2.
 - (b) Ensure that all BII/COEI for ORF assets are on-hand and serviceable. Accountability and control of BII/COEI will remain with the owning SSA. (All equipment not included on aircraft inventory record and maintained by separate accountability will be removed before exchange).
 - (c) Direct the repair of unserviceable ORF items.
 - i. The following formulas will be used to obtain or update the float factors.
 - (1) For initial computation of the ORF factor during materiel development and fielding:
 - (FMC Rate times MTTR) divided by MTBF plus MTTR.
 - FMC RATE obtained from AR 700–13.
 - Mean Time Between Failures (MTBF) is in days.
 - Mean Time To Repair (MTTR) is in days.
 - (2) The MTBF and MTTR are those operational requirements specified for that system by the CBTDEV, documented in the ORD, and included in the LSAR. When these elements are in rounds, hours, miles, or events, they must be converted to days. During development, MTBF and MTTR data will be obtained from the LSAR.
 - (3) For updating factors and computing initial factors for fielded equipment the following formula will be used:
 - (FMC GOAL–FMC RATE divided by FMC Rate)
 - FMC GOAL is from AR 700–138
 - FMC RATE can be computed using the following formula: (DENSITY times 365 DAYS)–TOTAL DOWNTIME–ORF TOTAL DOWNTIME divided by Density times 365 Days–TOTAL DOWNTIME is total repair time (from WO opened to WO closed)
 - ORF TOTAL DOWNTIME is the amount of downtime avoided because of ORF.
 - DENSITY is the TAEDP authorization
- (4) The formula for RCF factors is
 - Mean–Overhaul–Cycle–Time (MOCT) (–) Mean–Time–Between–Overhaul (MTBO).
 - MOCT is in months
 - MTBO is in months
- j. The float authorization and factors for an item will be deleted when:
 - (1) Directed by HQDA.
 - (2) The computed factor is .0000.
 - (3) The computed factor is less than .0100 and justification for retention is not received from MACOMs within one year.

4–40. Battlefield damage assessment and repair (BDAR)

- a. The purpose of BDAR is to rapidly return disabled equipment to combat or to enable the equipment to self-recover. BDAR is the commander's responsibility, based on METT–T, and is accomplished by the operator/crew and unit/DS maintenance personnel. Realistic training must be performed during peacetime to ensure wartime proficiency.
- b. Overview and guidance for the Army BDAR program will be provided by the BDAR Program Advisory Group (PAG) chaired by AMC and vice-chaired by TRADOC, AMSAA, and LOGSA.
- c. BDAR procedures are designed for battlefield and training environments and should be used only in situations where standard maintenance procedures are impractical. These procedures are not meant to replace standard maintenance procedures.
- d. Non-destructive BDAR procedures will be incorporated into peacetime maintenance training. Combat training centers and field training exercises provide excellent realistic training environments for BDAR. Peacetime BDAR involves low-risk fixes outlined in appendix E of BDAR TMs. Low-risk repairs are those that can be accomplished without risk to personnel or further damage to equipment and can be applied using approved BDAR kits under the supervision of qualified maintenance personnel. Peacetime BDAR repairs are temporary and will be replaced with standard maintenance repairs at the conclusion of the exercise whether in the field or in garrison.
- e. Many items of equipment will not require the development of a BDAR TM. The BDAR concepts and TMs must concentrate on those items of equipment that have a significant impact on the outcome of specific combat missions.
- f. BDAR doctrine and techniques will be evaluated during U.S. Army Ballistic Research Laboratory Live Fire Tests. Live fire test plans will incorporate BDAR into live fire tests on Army equipment to ensure that BDAR can be performed and to ensure such techniques are incorporated into appropriate equipment publications.

4-41. Painting, CPP, CARC, and marking of Army materiel

a. CARC/PPP responsibilities. The CG, AMC will provide management and direction for painting, PPP, CARC and marking of Army materiel as follows:

- (1) Provide the Lead Army Organization for PPP/CARC.
- (2) The Army Research Lab (ARL), Ft. Belvoir, Virginia has been given responsibility for testing and qualification of paint, technical instruction on painting procedures, and shelf life validation and extension.
- (3) AMC major subordinate commands will ensure that CARC requirements are included in all maintenance and new procurement.

b. Policies for painting.

(1) CARC is the approved coating for all combat and combat support equipment, tactical vehicles, aircraft, and essential ground support equipment and secondary item containers such as engine, transmission and all ammunition containers, including appropriate kits except as amended below.

(2) Paint will be applied only when the present paint is unserviceable or the equipment is not painted proper colors for contingency missions.

(3) Repainting for the sole purpose of achieving uniformity or for cosmetic purposes is prohibited.

(4) Tactical equipment designed for single color CARC requirement will be painted with an approved color based upon contingency mission environment.

(5) Complete repainting may be done at DS, GS, and depot levels where OSHA-approved facilities are available.

(6) Painting at unit level using a brush or roller is limited to spot painting. Spot painting includes restoration of painted surfaces after repair.

(7) Spot painting of CARC painted equipment will be with CARC only.

(8) Scratches, chips, or marring of the paint surface observed during PMCS will be repaired at unit level to prevent corrosion damage.

(9) If items do not require painting, do not paint them. For example, items made of fabric or which have anodized or parkerized surfaces are not painted.

(10) Do not paint the following with CARC:

(a) Painted items that attain surface temperatures of 400 degrees fahrenheit, serve a heat-conducting function or serve a function of expanding and contracting during operation. Examples are manifolds, turbo chargers, cooling fins, and rubber hoses.

(b) Displacement watercraft which will be subject to prolonged salt water immersion. Examples are the logistical support vessel and the landing craft utility.

(c) Nondeployable equipment and fixed installation systems. Examples are railroad rolling stock and fixed power generation systems.

(d) Installation/TDA equipment such as military police cars, nontactical fire trucks, and buses.

(e) Aluminum transmissions that are enclosed in combat vehicle powerpack compartments. However, any ferrous components of the transmission must be protected with CARC or other rust-preventive agents.

(11) Environmentally acceptable paints that do not violate Federal, State, and local laws will be used at all times per technical data packages provided to depots, arsenals, and contractors.

(12) CARC-protected surfaces are not to be covered with petroleum or other products to improve the appearance of the equipment. Utilization of these products will reduce the chemical protection provided by CARC and increase the probability of injury.

c. Policies for camouflage pattern painting.

(1) PPP is a three-color design for use in wooded and other green vegetated areas and in some arctic or partially snow-covered areas. PPP also includes single colors for use in desert or totally snow covered areas.

(2) PPP is required for all equipment previously camouflaged in one of the four-color patterns.

(3) PPP is required for all equipment having an area greater than 9 square feet on any side.

(4) PPP for new equipment will be specified in the technical data package (TDP) and will be applied at the time of manufacture.

(5) Camouflage colors must meet requirements for spectral and infrared reflectance, in addition to color, as established by the CECOM Research and Development Center (CRDC), Ft. Belvoir, Virginia.

(6) PPP, when available, will be applied to equipment during depot rebuild/overhaul or product improvement programs. If the three-color pattern has not been developed, a single color base coat will be applied. Where possible, depots will apply colors that conform to unit contingency missions if requested.

(7) Camouflage pattern painting of equipment having only a base coat will be accomplished by DS and GS activities. Patterns may be obtained from CRDC, Ft. Belvoir. If requirements exist that differ from the approved patterns and color scheme, MACOMs must request development of the required pattern/color scheme.

(8) MACOM commanders are assigned responsibility and authority to camouflage paint equipment with patterns

appropriate for contingencies. When a unit has more than one contingency plan, the CPP for the primary contingency will be used. Priority should be given to early deploying units.

(9) CPP will not be changed for training exercises.

(10) CPP will not be applied to the following:

(a) Equipment not requiring open area concealment.

(b) Nondeployable equipment and fixed installation systems.

(c) Equipment that must be painted per regulation or policy established by other services or Government agencies.

(d) Rotary and fixed wing aircraft. However, ground support equipment must have CPP applied per this regulation.

(e) Components of systems or items that can be transported in various modes and can be constructed or assembled into a variety of configurations.

(f) Stackable containers except missile containers that are a component of a weapon system.

d. Policies for marking materiel.

(1) Equipment will not be decorated with individual characteristic designs such as caricatures or cartoons.

(2) The style, size, and exact location of markings for all Army materiel will be specified in applicable TB 43- and 746-series and other DA technical publications, to include technical data packages.

(3) Special markings for nontactical vehicles are included in AR 58-1.

(4) Technical data, where appropriate, will be contained on metal or plastic plates or decals.

(5) The red cross insignia for Army Medical Department equipment will consist of a red cross composed of four square-shaped arms bordering on a center square of the same size and superimposed on a square white field slightly larger than the cross.

(6) Under tactical conditions, when requirements for concealment outweigh those for recognition, all conspicuous markings may be obscured or removed by the authority and at the discretion of the major organization commander present. Protective red cross markings may be obscured only at the direction of the responsible major tactical commander.

(7) Overseas commanders may deviate from this regulation when host countries require special markings per international agreements.

(8) Before Army materiel is sold or permanently transferred from the jurisdiction of DA, all Army identification markings will be removed or permanently obliterated by sanding or chipping.

(9) Missile Command equipment will be marked according to MIL-STD 1473.

(10) Markings on the exterior of tactical equipment will be applied or oversprayed with materials resistant to chemical agents.

(11) Safety marking, including hazard warning and caution information, for nontactical equipment, tactical equipment not subject to the Army camouflage policy, and equipment at fixed facilities will comply with the provisions of AR 385-30. Materiel painted in camouflage requiring hazard warning and caution information will have this information applied in a contrasting color.

e. All requests for waiver to the above policies will be forwarded to HQDA (DALO-SMM) per paragraph 1-4.

f. Commanders at all levels will make adherence to the policies on CARC a matter of command interest during all visits, inspections and evaluations.

4-42. Quality deficiency reports and equipment improvement recommendations

a. All Army materiel is subject to QDR and EIR. The purpose of submitting a QDR is to report conditions that are the result of below-standard quality workmanship, and to file claims for initial failure credit from the DBOF-SMA for depot level reparables (DLR). The purpose of an EIR is to suggest materiel improvements in design, operations, or manufacture. Reporting instructions for QDRs and EIRs are contained in DA Pam 738-750 and DA Pam 738-751.

b. The unit or activity that identifies the need for a QDR or EIR is responsible for its submission.

c. When a QDR or EIR results in configuration changes to fielded materiel, the guidance in the IOI for Army MCM, 6 Sep 90, will be followed.

d. Submission of QDR/EIR has been added to the evaluation criteria for the Chief of Staff, Army Award for Maintenance Excellence.

4-43. Administrative storage of materiel

Administrative storage is the placement of organic materiel in a limited care and preservation status for short periods of time. This applies to MTOE and TDA units. Policy for installation of TDA equipment is located in AR 71-13, chapter 4.

a. Administrative storage will be considered when—

(1) An activity lacks operating funds, people and other resources, or when normal usage of its equipment is not adequate to sustain materiel readiness.

(2) Lack of maintenance resources causes an owning organization to be incapable of performing the required unit maintenance of its equipment.

(3) In addition to (1) and (2) above, equipment that exceeds the capability of the owning organization to operate or maintain must be retained by that organization for contingency or other valid reasons.

(4) Completion of current mission does not require use of authorized equipment on a routine basis.

(5) Training requirements of units or individuals do not require the use of all MTOE equipment.

b. Before a decision is made to use administrative storage, the commander will consider all workable options for maintaining equipment readiness.

c. Nontactical wheeled vehicles are not authorized to be placed in administrative storage.

d. Installation commanders may authorize the administrative storage of their materiel within guidance furnished by this regulation. To the maximum extent practical, administrative storage of materiel will be controlled and supervised at battalion level or above.

e. MACOM commanders responsible for administrative storage—

(1) Furnish assistance to commanders as required in carrying out an administrative storage program.

(2) Monitor the status of material in administrative storage in their commands.

(3) Conduct a command level review of administrative storage at 6-month intervals to reassess and revalidate the requirement.

(4) Forward results of these reviews, with appropriate recommendations, to HQDA (DALO-SMM) when the circumstances are beyond the capability of the MACOM commander to resolve.

f. When more than 25 percent of an organization's onhand equipment must be placed in administrative storage, the MACOM commander will consider initiating action to reorganize the activity at a level of equipment authorization that can be operated and maintained.

g. Administrative storage of aircraft will be considered in the same category as short-term storage and accomplished per the applicable AVUM or AVIM technical manual. In no case will aircraft remain continuously in administrative (short-term) storage for more than 45 days. At the expiration of that time, aircraft will be restored to an FMC status, or placed in intermediate storage up to, but not exceeding 180 days.

h. Equipment in administrative storage will have all major subsystems exercised as directed by applicable TMs. Any faults detected will be corrected. The materiel will then be completely reprocessed if it is to be returned to administrative storage.

i. Before equipment is placed in administrative storage, it must meet the maintenance standard outlined in paragraph 3-1 *a*.

j. All regularly scheduled preventive maintenance services are suspended while materiel is in administrative storage.

k. Special scheduled services, inspections, maintenance standards and procedures, or other readiness evaluations prescribed in applicable material operators' manuals will be followed. For aircraft, the applicable unit maintenance technical manual and TM 55-1500-204-25/1 will be used. Performance of the services is the responsibility of the unit storing the materiel. Faults noted during these required services, inspections, and evaluations are corrected as quickly as practicable.

l. Equipment will be rotated per a rotational plan that will keep it exercised and reduce maintenance effort.

m. Equipment will be stored to provide maximum protection from the elements, to provide access for inspection, maintenance, and exercising, and to provide physical separation from active equipment.

n. Equipment in administrative storage is accounted for per AR 710-2. Asset reports are submitted under AR 710-3 and materiel condition status reports under AR 220-1 and AR 700-138.

o. Materiel removed from administrative storage will—

(1) Be restored to normal operating condition.

(2) Have all MWOs applied.

(3) Be returned to a normal PMCS schedule using the last type service completed.

(4) Calibrated as required.

p. The access to materiel in administrative storage will be strictly controlled to prevent cannibalization or pilferage.

4-44. Depot repair and return programs

a. The objective of all repair and return programs is to extend the service life of the equipment and improve unit materiel readiness. This is done by sending equipment from the DS and GS levels to the depot level for repair and return to the DS and GS levels without supply action.

b. Policies applicable to the depot repair and return program are as follows:

(1) Intra-Army depot level repair and return programs are negotiated between the MACOM/major subordinate command requiring support and the supporting MACOM/major subordinate command.

(2) Interservice support agreements and commercial contracts for repair and return programs will be developed and established under guidelines in sections IV and V of this chapter, and other pertinent Army and DOD directives and policies.

(3) All depot repair and return programs are formalized by a memorandum of agreement (MOA) or memorandum of understanding (MOU), with a performance work statement or scope of work attached. These documents define

precisely the quantity of items, the unit or program costs, projected time frames, level of repair, and property accountability procedures. All MOA or MOU will include a requirement for project code "RDP" (romeo-delta-papa) to be used to identify items as MACOM assets during the shipment, repair, and return process.

(4) In-process reviews of all established depot repair and return programs will be held at least semiannually. As a minimum, all signatories of the agreement will attend.

(5) Unless prevented by the operational situation or agreed upon in writing, all unit maintenance will be completed before materiel is evacuated for repair and return. The materiel will be shipped to and returned from the performing activity without BII.

(6) Combat and tactical vehicles retrograded to depot maintenance facilities for completion of DS and GS levels of maintenance will normally be repaired on a return-to-user and reimbursable basis. Such support may be authorized by the appropriate materiel proponent and MACOM when—

(a) The workload at the DS and GS maintenance levels prevents the timely and economic repair of the equipment, and a replacement or acceptable substitute is not available from command assets, while the workload at the depot maintenance facility will permit such repair.

(b) Such action will facilitate the timely and economic installation of a modification or other product improvement.

(7) Aircraft that require unprogrammed depot maintenance will be reported to the NMP/NICP for scheduling into a depot facility. These aircraft will be processed on a nonreimbursable basis. Commands or activities requiring maintenance support that exceeds the capacity of available AVIM activities will request such assistance through the appropriate AVIM activity to the NMP/NICP. This work will be processed on a reimbursable basis.

(8) The memorandum of agreement for a depot repair and return program will outline procedures to accomplish asset tracking per AR 710-3.

c. Depot repair and return program responsibilities are as follows:

(1) CG, AMC will—

(a) Provide guidance to Depot Systems Command and major subordinate commands on implementation of the depot level repair and return program.

(b) Negotiate and sign formal implementation documents for all reimbursable work order programs.

(c) Provide funds for AMC-sponsored program request and order number repair and return programs.

(d) Ensure repair parts are available to support the repair and return programs.

(e) Immediately notify the supported MACOMs of any changes to the memorandum of agreement and participate in all formal IPRs.

(2) Supported MACOMs will—

(a) Determine requirement for and scope of depot level repair and return programs.

(b) Negotiate and sign all formal implementation documents for repair and return programs.

(c) Program funds in annual command operating budgets for reimbursable work order repair programs. Budgets will include funds for second destination costs.

(d) Select and provide reparable equipment to repair activities as scheduled.

(e) Provide any changes as they occur to the MACOM performing the work and participate in all formal IPRs.

4-45. Maintenance of pneumatic tires

a. *General policies.*

(1) Command emphasis is required at all levels to obtain maximum safety and savings benefits from the proper use of retread tires.

(2) Surveillance procedures will be established to ensure that all reparable vehicle and aircraft tires are recovered prior to the end of their useful life.

(3) Reparable tires will be retreaded, not discarded or processed through Defense Reutilization and Marketing Office (DRMO) unless classified not reparable/not economically reparable.

(4) Except for restrictions listed below, or approved as waivers by HQDA (DALO-SM), using activities will use retread tires.

(a) Two-ply tires, without breaker strips or belts will not be retreaded.

(b) Buses will not be operated with retread tires on the front wheels.

(c) M520 truck series and M747 semitrailers will not be operated with retread tires.

(d) M911, M916, M920, M915, and M915A1, heavy hauler, truck tractor vehicles will not be operated with retread tires on steering axles.

(e) Applicable state and federal transportation codes will be met when a vehicle is operated off the installation.

(5) Regrooving of tires is not permitted because it is not structurally viable or cost-effective.

b. *Responsibilities specific to the Army's tire retread program.*

(1) The DCSLOG's responsibilities are in paragraph 2-2 k.

(2) CG, AMC's responsibilities are in paragraph 2-14 s. This program will include a system of inspecting and periodically evaluating all organic or contract aircraft and vehicle tire retread activities utilized by the Army.

(3) Major Army commanders, The Surgeon General, and Chief of Engineers will obtain the most cost-efficient use of the retread tire program and maximize safety during pneumatic tire use by—

- (a) Maximizing use of training courses dealing with pneumatic tires.
- (b) Ensuring thorough inspection of pneumatic tires mounted on vehicles and aircraft during PMCS and removal when tread depths reach the dimension for retreading.
- (c) Ensuring that all maintenance personnel are complying with the requirements of TM 9-2610-200-24, TM 9-2610-201-14, and TM 55-2620-200-24.
- (d) Developing accurate workload requirement forecasts.
- (e) Reporting excess serviceable (new and retread) and economically repairable tires to the NICP for disposition per AR 725-50, chapter 7.
- (f) Ensuring that qualified personnel are available to inspect and classify tires prior to shipment for retreading or to DRMO and to perform acceptance inspection on receipt of retread tires from the retreader.
- (g) Developing aircraft tire usage and performance data upon request from the Department of Defense.

c. Quality of retread tires.

(1) Retreading can be performed several times as long as the casing is removed from the vehicle before damage occurs.

(2) Installations and stock record account activities will ensure that all retreaded tires are inspected for quality of workmanship upon receipt. Upon discovery of deficiency in workmanship or quality, inspectors will immediately initiate a QDR/EIR to TACOM or ATCOM.

(3) When required, these commands will provide technical assistance to unit, DS, and GS maintenance personnel.

d. Training.

(1) All commanders will ensure that training will be provided to all individuals who service single-piece or multi-piece rims and wheels used on large vehicles. These individuals will demonstrate proficiency in their ability to perform specific tire, rim, and wheel tasks. Individual ability to perform these tasks will be evaluated and a record maintained documenting this evaluation.

(2) CONUS training courses pertaining to pneumatic tire inspection, classification, and rebuild standards are conducted at Tooele Army Depot. Training requirements may be coordinated with the Commander, Tooele Army Depot, ATTN: SDSTE-MAE-D, Tooele, UT 84074.

(3) European training classes in pneumatic tire inspection, classification care, and maintenance are conducted by the U.S. Army Depot Activity, Ober Ramstadt at the unit location. Training may be coordinated with the Commander, U.S. Army Depot Activity, ATTN: SDSMZ-OR-T (Ober Ramstadt), APO AE 09175.

e. Warranties. Tires repaired or retreaded by General Services Administration (GSA) contractor or local commercial sources are guaranteed against defects in material or workmanship for the tread life of the tire. Defective tires will be returned to the contractor for repair or adjustment and reported per DA Pam 738-750 and DA Pam 738-751. Defective tires rebuilt by Government facilities will be retained as exhibits and reported for disposition, per DA Pam 738-750 and DA Pam 738-751.

4-46. Component safety program (CSP)

a. The objectives of the CSP are to—

- (1) Provide maximum assurance that all Army materiel meets established safety related requirements.
- (2) Identify and control critical safety items throughout the materiel life cycle.
- (3) Establish, evaluate, and substantiate structural integrity.
- (4) Verify rates of deterioration, detect degradation, identify unsafe conditions, and assess serviceability.
- (5) Identify items for timely maintenance or disposal.
- (6) Restrict use of items with marginal reliability or safe performance level.
- (7) Initiate improvements based on available quality, surveillance, test, and performance data.

b. Component safety program responsibilities are as follows:

- (1) The DCSLOG will—
 - (a) Serve as the principal staff element for planning, developing, and disseminating CSP policy.
 - (b) Program and fund all equipment and materiel requirements and services necessary to conduct the CSP.
- (2) The CG, AMC will—
 - (a) Manage the system of CSP publications.
 - (b) Implement the CSP on those items for which AMC is accountable.
 - (c) Coordinate as required with other MACOMs in conducting the service life surveillance portion of the CSP.
 - (d) Provide the DCSLOG, through established channels, the AMC budgeting, programming, and funding needs.
- (3) MACOM commanders will—

- (a) Include planning and support of the CSP as an integral part of their mission requirements.
- (b) Provide support within their mission and capability as requested by the CG, AMC. This support includes providing inspections/test facilities and sample quantities of items for surveillance as necessary.
- c. Critical safety items must be identified and controlled throughout a product's life cycle. Considerable attention must be given to ensuring that these items conform to design requirements during manufacturing and reconditioning. In addition, items in transport, storage, or use must be assessed for retention of the critical safety characteristics. This provides a proactive approach to eliminating unsafe conditions. Implementation of the CSP should, where applicable, build on existing requirements such as MIL-STD-1629, MIL-STD-785, and MIL-STD-882.
- d. The CSP encompasses four distinct activities: the identification and control of critical safety items; service life surveillance; performance feedback and analysis, and corrective actions/improvements. Ensuring of structural integrity (minimized risk of structural failure) must be a consideration during all phases of the CSP to facilitate diagnosis of possible structural failures, prediction of operational life expectancies, and improvement of design. Attention must be given to design conditions, materials and processing controls, design and analysis control, quality assurance controls, and in-service controls during the earliest design stages.
- e. Activities responsible for the acquisition of Army materiel must establish a management program for the control of critical safety items. The program encompasses the following elements:
 - (1) Life cycle identification of critical safety items and characteristics beginning during design or development and continuing through production to post production processing and phaseout.
 - (2) Validation of critical design characteristics prior to production to ensure all critical aspects of the design are accurately documented and parts or materials operate as intended. Timely identification, scheduling, and application of test and analysis techniques are essential for validating the design and substantiating structural integrity.
 - (3) Establishment of intensive manufacturing and quality controls for critical safety items by producers and contractors.
 - (4) Establishment of intensive processing and quality controls by depots and activities performing maintenance, repair, rework, or overhaul on critical safety items.

4-47. Tool Improvement Program Suggestions (TIPS)

- a. The TIPS program is a means for the users of tools to report deficiencies in tools; recommend tools for deletion from, or addition to, sets, kits, and outfits; and suggest modifications to tools which will improve the usefulness of the tools.
- b. ODCSLOG (DALO-SM) is the proponent for TIPS and will—
 - (1) Approve Army policy for TIPS.
 - (2) Resolve conflicts between Army Agencies.
 - (3) Review and approve TIPS documentation developed by U.S. Army Force Integration Support Agency (USAFISA).
- c. Commander, USAFISA is the executive agent for TIPS and will—
 - (1) Propose Army policy for TIPS.
 - (2) Establish procedures for functional and operational control of the TIPS as follows:
 - (a) Receive, analyze, evaluate, coordinate, and staff suggestions and recommendations.
 - (b) Approve or disapprove TIPS initiatives and provide feedback to submitters and evaluators.
 - (c) Ensure that approved initiatives are implemented.
 - (d) Maintain files and statistics for TIPS.
 - (3) Publicize the program to ensure Army-wide awareness of TIPS and improvements/changes to tools, sets, kits, and outfits.
- d. When a suggester (military or civilian) experiences difficulty with a tool that impacts the unit mission, he or she is responsible for notifying the Army's executive agent for tools. This notification may be submitted in any reasonable format, and by any means of documentation available, including datafax and/or electrical message. The initiative must be clearly stated, explain the problem and provide a proposed resolution. (DA Pam 738-750 will contain definitive guidance on TIPS initiatives.) Initiatives must be addressed to: USA Force Intergration Support Agency, ATTN: MOFI-TED-E, Fort Belvoir, VA 22060-5587. Information or assistance may be received telephonically by calling DSN 345-2512 (CML 703-355-2512). The datafax number is 345-3252 or 703-355-3252.
- e. Evaluators are subject matter/technical experts at TRADOC schools or AMC/TRADOC major subordinate commands. The evaluator, when tasked, will conduct a complete evaluation of the initiative, to include cost/time savings or avoidance and return comments and recommendations to USAFISA within established timeframes.
- f. If the evaluator determines that a prototype tool is required for testing, he or she will notify USAFISA. USAFISA will provide mailing instructions and a TIPS control number to the suggester. The suggester should provide a prototype tool only upon request. The suggester or his or her unit, upon the commander's approval, must bear the cost of providing required prototype tools.

Table 4–1**ORF annual demand data sample format Operational Readiness Float Jan 1 thru 31 Dec 19**

MACOM								
Installation or Unit	LIN	Noun	Tot. Dmd.	Avg. Down–time Days	ORF Auth (TAEDP)	Qty o/h	MSC Code	Rmk
W45XU1	T61494	TRK, Utl	2	5	1	1		
W45CU1	T61494	TRK, Utl	4	10	2	1		
MACOM TOTAL			6	8.03	3	2		

Notes:

¹ Primary sort should be by MSC code.² Enter installation or unit name and UIC of the unit actually holding the ORF assets.³ Enter the LIN in alphabetical order.⁴ Tot. Dmd. is total demands for an item including those that were issued and those that would have been issued if an asset had been available.⁵ Avg. Downtime Days is the average of the total downtime in days of all items for which an ORF demand was recorded.⁶ ORF Auth. TAEDP is the total MACOM authorization for an item as shown in the TAEDP.⁷ Remarks will be used by the MACOMs to provide additional information or highlight specific problems not reflected by the data.⁸ Consecutively numbered notes referred to in 'Remarks' and entered at the end of the report are acceptable.⁹ MACOMs will submit a roll up of subordinate ORF accounts. Each LIN will be summarized at the MACOM level (to include the average down time computed at the MACOM level).¹⁰ Average down time at MACOM level is computed by adding the average down time in days times the total demands, for each unit, and then dividing by the total MACOM demands.

Chapter 5

Commodity–Oriented Maintenance Policies

Section I

Maintenance of combat vehicles

5–1. Overseas commands not having depot maintenance capability

Overseas commands not having depot maintenance capability will report combat vehicles requiring depot maintenance support to, and receive disposition instructions from, the appropriate materiel proponent under AR 750–2.

5–2. Utilization programming

Operational usage standards for combat vehicles will established by each MACOM. These standards will be stated in terms of average miles/rounds per vehicle and total allowable unit and fleet mileage per unit of time. The objective of these standards is to ensure the development of a command usage pattern for combat vehicles that will result in these items reaching replacement at a rate consistent with in–country and/or DA ability to replace them. The ARNG and USAR must perform periodic rotation of high usage combat vehicles at MATES and ECSs with low usage combat vehicles to ensure equal utilization.

5–3. Selection of equipment for overhaul

a. Combat vehicles reaching a mileage interval prescribed by AMC will be inspected by wholesale level teams that apply a scoring procedure developed by AMC to select those vehicles in need of an overhaul. Only these vehicles will be directed for return to an AMC depot. A copy of the evaluation will accompany the vehicle when it is sent to an overhaul facility.

b. Combat vehicles not yet reaching the prescribed mileage threshold but considered to be overhaul candidates by the user MACOM, may be nominated by the MACOM for evaluation by the teams.

c. Combat vehicles requiring extensive modernization in a depot facility may be inducted without benefit of the combat vehicle evaluation. These vehicles are repaired as necessary during the modernization.

d. Approved repair candidates will be scheduled and retrograded into depot maintenance shops per the annual combat vehicle evaluation program.

e. Combat vehicles eligible for depot overhaul by this regulation will be—

(1) Replaced with new, or low mileage vehicles when such assets are available.

(2) Repaired at depot maintenance shops and returned to user when replacement assets are not available.

f. When a replacement item is not available and the depot cannot repair and return it to user, MACOMs will repair the items to GS standards. Units will continue using the item at a low priority, low usage rate until a replacement is available.

g. The ARNG major item maintenance requirement program for surface equipment will be developed as a part of

TAMMS data submitted by the States. All depot maintenance for end items (except aircraft) will be on an exchange or repair-and-return basis. The aircraft depot repair program will be scheduled on an exchange basis. All surface depot programs for major end items will be controlled and funded at the NGB level. States will coordinate directly with supporting area TMDE support teams (ATSTs) for calibration services and calibration repairs provided to the State under NGB-funded programs. Surface equipment that requires unscheduled or urgent depot repair will be reported to NGB-ARL-M for consideration on a case-by-case basis, and aircraft in that condition will be reported to NGB-AVN. Army surface equipment will be selected for depot repair under the following criteria:

(1) All major end items, type classified standard, that meet condition requirements as determined by the commodity command concerned.

(2) All major end items, type classified standard, in an unserviceable condition beyond the capability of GS maintenance.

(3) Major end items that have a record of frequent maintenance failure requiring extensive repairs and for which the recurring failures, if repaired at a depot facility, would be cost-effective.

(4) Combat vehicles will be selected for depot repair on a condition basis (not on mileage) when technical inspection by GS maintenance indicates that depot repair is in the best interest of economy and readiness.

(5) Towed and self-propelled artillery weapons, mortars, and recoilless rifles will be selected for depot repair per TB 750-231.

(6) Tube launched, optically tracked, wire guided (TOW) missile system components requiring repairs or services that are beyond the capability of GS maintenance will be reported to U.S. Army Missile Command (MICOM), Redstone Arsenal AL, 35898-5238, for evacuation instructions. Dragon missile system components requiring repairs or services that are beyond the capability of DS maintenance will be reported to Anniston Army Depot for exchange. Missile system component support will be funded by the NGB through Missile Command. When support is obtained from an Active Army installation or organization, repairs and/or maintenance services provided will be funded as agreed upon by the contracting parties.

(7) For current year requirements, NGB-ARL-M will provide the commodity commands and Depot Systems Command with the DD Form 448 (Military Interdepartmental Purchase Request) for major end items and calibration services/repair support. Calibration services and red tag repair of TMDE will be funded by NGB and provided by the TMDE support group ATSTs to States within the team's area of responsibility. A schedule for depot work input will be provided to each State concerned. The State will prepare a DA Form 2407 to the designated depot with necessary shipping documents. The State will retain ownership of the item during the entire repair-and-return process, or the item may be exchanged. Transportation costs of a major item to and from depots will be per AR 130-400.

(8) Reconditioning and repairing of combat vehicle tracks and road wheels and related rubber products will be funded directly by NGB. Scheduling for such work should be coordinated with RRAD project office, and forwarded directly to CDR, Red River Army Depot, Production Control Division, ATTN: DRCRR-MD, Texarkana, TX 75501.

(9) For other than major item repairs and/or services to be provided through the Army depot system, requests for secondary items and fuel tank recoating will be processed as follows: States requiring DS or GS level backup maintenance assistance will request such support from the commodity command having responsibility for the item. Repair of secondary items (for example, ballistic computers, telescopes, and periscopes) are authorized if a replacement is not available through the supply system, the cost of repair is less than 50 percent of the replacement cost, or if the time to receive a replacement item will adversely impact on the unit's readiness.

5-4. Waivers

Requests for waiver will be submitted per paragraph 1-4. In addition, the request will detail the availability of vehicles in terms of full mission capable or not mission capable, supply or maintenance, and safety as a function of usage.

Section II

Maintenance of Watercraft and Amphibians

5-5. General

a. Purpose. To establish policies that are specific to the maintenance of Department of the Army watercraft.

(1) The materiel maintenance system that supports Army watercraft is made up of diverse maintenance activities that share the common goal of creating and sustaining watercraft combat readiness.

(2) The three major functional responsibilities of the Army watercraft maintenance activities are sustaining materiel in an operational status, restoring it to a serviceable condition, and updating or upgrading its functional usefulness through modification and product improvement.

(3) The objective of Army watercraft maintenance is to ensure safe, seaworthy, reliable, and fully mission-capable watercraft.

b. Scope. This section applies to Army watercraft and amphibians worldwide.

(1) Army watercraft and amphibians are defined in AR 56-9, DA Pam 738-750 and TM 55-500.

(2) Tactical river crossing materiel or non-MTOE/TDA watercraft utilized by the U.S. Corps of Engineers in its

civil works projects/activities (except those items of marine engineering materiel to be activated in the time of mobilization) are excluded from the requirements herein.

c. Organization. To accomplish the objectives of the Army watercraft maintenance system, watercraft maintenance tasks are distinctly organized into wholesale and retail maintenance; each is responsible for the performance and management of its materiel maintenance functions. This responsibility is established in ARs, TOEs, MACs, preventive maintenance manuals and other regulatory and technical publications.

(1) Retail maintenance is that maintenance that is within the capability of and is the responsibility of the operating forces. The responsibility to perform retail maintenance operations within a given level (unit, DS, or GS) is assigned based upon mission, degree of mobility and complexity, intended availability of personnel, skills and materiel resources. Actual maintenance tasks to be performed are listed in the MAC of the applicable technical manual.

(2) Wholesale maintenance is that maintenance that is beyond the capability of the operating forces and commonly referred to as depot level maintenance. Specifically, wholesale maintenance is defined as that level of maintenance requiring the necessary personnel, skills, facilities and equipment to perform industrial type maintenance functions. Wholesale maintenance is solely the responsibility of the National Maintenance Point (NMP).

5-6. Maintenance policies

a. General.

(1) All watercraft maintenance units and activities will ensure compliance with this regulation. The NMP will ensure that wholesale level operations are in full compliance with this regulation and AR 750-2.

(2) The NMP/NICP will establish and maintain watercraft configuration and logistics support management programs necessary to support watercraft throughout its lifecycle.

(3) The NMP will provide a system, as shown below, for the performance of maintenance and/or repair actions on Army watercraft that exceed the capability and/or capacity of the retail level.

(a) Overhaul/repair of end items and other materiel designated by the equipment proponent via the MAC or other appropriate means.

(b) Manage/execute the On Condition Cyclic Maintenance (OCCM) Program for Army watercraft.

(4) The NMP will establish and maintain a system for providing maintenance guidance and direction to the retail community upon request.

b. Emergency repairs.

(1) A thorough marine condition survey/technical inspection will be performed by qualified personnel to ascertain the scope of work necessary to return a watercraft to a serviceable condition.

(2) Should wholesale maintenance be required, due to the scope of work necessary to return the watercraft to a serviceable condition, disposition instructions and funding guidance will be requested from the NMP/NICP. Wholesale maintenance will be accomplished on a case-by-case basis as directed by the NMP as shown below.

(a) When emergency repairs dictate that a watercraft be dry-docked to accomplish the necessary repairs it is considered wholesale maintenance.

(b) When operational conditions dictate, the NMP may authorize lower level maintenance activities to perform emergency repairs beyond their authorized level of repair action.

(c) Watercraft awaiting disposition instructions will be maintained in administrative storage.

(3) When engaged in sailing operations (underway/deployed away from home port) and maintenance problems occur where normal corrective action can not be completed, a vessel master is authorized to perform any level of maintenance required to maintain the watercraft in a seaworthy, safe and operable condition. This decision will be made while considering the availability of resources at sea, the skill of the crew, and the impact the repairs will or will not have on the basic sea- worthiness and operability of the watercraft.

(a) When the above condition exists, suitable repairs may be accomplished to correct the emergency. However, materiel so repaired must be removed from operation as soon as possible and properly repaired before being returned to an operational condition.

(b) The NMP will provide maintenance instructions and assistance in the above cases upon request.

(c) The above policy is also applicable to maintenance of electronic materiel installed on-board watercraft.

c. ORF support, when authorized, will normally be limited to landing craft, amphibious lighters, and associated support materiel.

d. Requests for assistance and/or guidance should be made through normal channels to—

(1) Mailing address: Commander, U.S. Army Aviation and Troop Command, ATTN: AMSAT-I-MMWR, 4300 Goodfellow Blvd, St. Louis, MO 63120-1798.

(2) Message address: CDR ATCOM STL MO//AMSAT-I-MMWR//.

(3) FACSIMILE: Cdr ATCOM, ATTN: AMSAT-I-MMWR, DSN 693-9373.

5-7. On condition cyclic maintenance

a. General. All Army watercraft will undergo OCCM per the intervals established in table 5-1. The intervals in

table 5-1 are maximum time intervals. If more than 3 months deviation is anticipated, a request for waiver with justification will be forwarded to ATCOM. OCCM consists of a series of inspections and maintenance actions that are designed to ensure that a watercraft's structure (internal and external), piping, main and auxiliary engines, electrical installations, life-saving appliances, fire detecting and extinguishing equipment, pollution prevention equipment, and other equipment is maintained in a suitable, seaworthy, and safe condition.

Table 5-1
On Condition Cyclic Maintenance/Drydocking Intervals

Class/Type watercraft	OCCM Interval
Class "A"	
BDL, DS 5002	36 Months
LSV	
FS, All	(OCCM Survey at 30 Mos)
LT, DS 3006	
ST, DS 3004	(Interim Survey at 18 Mos)
LCU, All	
Class "B"	
J Boat, DS 4003	36 Months
T Boat, DS 2001	
LCM-8, All	(OCCM Survey at 30 Mos)
FB, All	
ST, DS 320	(Interim Survey at 18 Mos)
Class "C-1"	
ROWPU Barges	36 Months
FMS, DS 7011	
BRM, DS 7016/7010	(OCCM Survey at 30 Mos)
BD, DS 264B/413D	
BG, DS 231B/231C	(Interim Survey at 18 Mos)
Class "C-2"	
Stationary Tng Platforms	48 Months
BC, All	
BCDK, All	(OCCM Survey at 42 Mos)
BK, All	
BPL, All	(Interim Survey at 24 Mos)
Wooden Hull Vessels	12 Months
Q Boot, DS 4002	(OCCM Survey at 6 Mos)
	(No Interim Survey Required)

b. Inspections. Marine condition surveys incident to the performance of OCCM will be accomplished per paragraph 5-8.

(1) One hundred eighty days prior to the scheduled OCCM cycle a marine condition survey will be performed. This survey will provide the basis for written specifications by which OCCM is accomplished. This will be a dock-side inspection. When possible, the services of qualified divers will be utilized to ascertain the condition of the watercraft's hull and appendages below the deep load waterline.

(2) At the time of dry-docking, a dry-dock inspection will be performed to identify additional repair/maintenance requirements not observable at the time of the 180 day inspection (dockside).

(3) Periodic surveys required by the United States Coast Guard (USCG) and the American Bureau of Shipping (ABS) for retention of "loadline" certification will be accomplished per 46 CFR subchapter E and TB 55-1900-201-45/1. When such inspections are required, the services of ABS will be employed.

(4) In addition to the 180 day marine condition survey, the NMP will also conduct an interim survey after 50 percent of the OCCM drydocking interval has elapsed. Whenever possible this survey will also include an underwater hull survey as defined by TB 55-1900-201-45/1.

c. Maintenance. The scope of work to be accomplished during OCCM will vary dependent on watercraft condition, resource limitations, class of vessel, and other factors. As a minimum, the following maintenance and repair actions will be accomplished during OCCM:

(1) Bottom cleaning and painting up to the deep load waterline per TB 43-0144.

(2) All repairs below the deep load waterline as identified during the dry-dock inspection/underwater hull survey.

(3) Overhaul/replacement/renewal of all major components identified for overhaul at the depot level. The requirements will be determined through diagnostic testing, hours of operation, and inspection of internal components as directed by the NMP.

(4) All other maintenance and/or repairs identified by the marine/ship surveyor required to effect a permanent change in the watercraft's condition so as to ensure the following:

- (a) Capability of operating in an unrestricted manner for the purposes intended.
 - (b) Capability of being maintained and operated per all applicable regulations, rules, laws, and policies.
 - (c) The sustainment of the inherent reliability and maintainability designed and manufactured into the equipment between repair cycles (OCCM).
 - (d) The sustainment of acceptable rates of watercraft readiness between OCCM cycles.
- (5) Application of all outstanding modification MWOs, minor alterations, modernization and/or special inspections will, to the maximum extent feasible, be accomplished concurrently with OCCM.

5-8. Marine condition surveys

a. General. Marine condition surveys are technical inspections and written evaluations performed by qualified marine surveyors per TB 55-1900-201-45/1. The NMP is responsible for developing the policies and procedures applicable to the performance of marine condition surveys.

b. Marine condition surveys on Army watercraft will only be performed by experienced and qualified technical experts. This requires the surveyor to be thoroughly familiar with and capable of interpreting written standards, Federal laws, rules, and regulations affecting watercraft inspection, common watercraft construction, maintenance and repair procedures. The marine surveyor must also be capable of preparing written repair specifications and estimating repair costs (man-hour and materiel costs) for repairs required to return a watercraft to condition code "B" as defined by AR 725-50.

c. The NMP is responsible for the performance of all marine condition surveys incident to the repair and/or overhaul of Army watercraft when the maintenance/repair action is to be accomplished at the depot level. This includes all marine condition surveys incident to the accomplishment of OCCM as defined by this regulation.

d. Support maintenance organizations and activities at the retail level are responsible for performing marine condition surveys incident to the repair of Army watercraft at their level or evacuation to the next highest level.

e. When qualified marine surveyors are not available at support facilities, assistance may be requested through normal channels to the NMP IAW para 5-6 above.

5-9. Maintenance reporting

TAMMS forms and records on watercraft, landing craft, and amphibians will be completed according to DA Pam 738-750, TB 43 -0002-26, TB 55-1900-205-24, TB 55-1900-201-45/1, and AR 56-9.

Section III

Maintenance of Communication Security (COMSEC) Materiel

5-10. General requirements

a. The maintenance of COMSEC materiel is greatly influenced by the security requirements concerning personnel, operations, and maintenance of COMSEC materiel. These requirements are contained in AR 5-3, the AR 380-series, AR 604-5, AR 640-15, and DA Pam 738-750.

b. COMSEC materiel consists of—

- (1) Publications and classified equipment that are managed within the COMSEC materiel control system.
- (2) Publications and unclassified COMSEC equipment that are managed within the Army maintenance and supply systems.

c. The CG, AMC is responsible for the wholesale logistic support of Army COMSEC materiel.

d. Commanders at all levels are responsible for the proper maintenance of COMSEC materiel under this regulation.

e. This section applies to—

- (1) All elements of the active Army, ARNG, and USAR that maintain, inspect, or requisition COMSEC materiel.
- (2) Contracting officers who administer Army contracts that require or authorize the issue of COMSEC materiel to a contractor.

5-11. Maintenance policies

a. TMDE used for maintenance of COMSEC materiel will be calibrated under AR 750-25, TB 43-180, or specifications issued by the CG, AMC.

b. Unit, DS, GS, SRA, and depot maintenance will be accomplished on COMSEC materiel under the concepts and policies set forth in chapter 3 and this section as modified by COMSEC directives and materiel publications.

c. General technical instructions for completion of maintenance operations and testing of COMSEC materiel are contained in National Security Agency maintenance documents and in DA materiel publications. DA Pam 310-9 contains a listing of those publications that apply to COMSEC materiel and gives requisitioning instructions for National Security Agency and DA publications.

d. The provisions of DOD 5220.22–R and Federal acquisition regulations that pertain to contract maintenance apply to COMSEC materiel. In addition, commanders and contracting officers will ensure that contractors meet all applicable criteria contained in this regulation and AR 750–2. To ensure that these criteria are satisfied, as well as to facilitate the management of COMSEC materiel, requests for exception will be forwarded to the Commander, USACSLA, ATTN: SELCL–NMP, Fort Huachuca, AZ 85613–7090 for approval.

5–12. Modification of COMSEC materiel

Modification of Army–owned COMSEC material will be reported under DA Pam 738–750.

5–13. Records and reports

Performance of maintenance operations on COMSEC materiel will be recorded under DA Pam 738–750.

5–14. Qualification and training of maintenance personnel

a. The personnel qualification requirements for the maintenance of COMSEC materiel are established in AR 640–15.

b. The initial training of personnel for the support of new or modified COMSEC materiel will be under DA Pam 351–4.

5–15. Supply of parts and special tools

a. COMSEC maintenance activities will establish and maintain PLL and shop stocks per AR 710–2, for both classified and unclassified repair parts.

b. Cannibalization of COMSEC materiel will be accomplished according to chapter 4, after approval by the Commander, USACSLA, ATTN: SELCL–NMP.

c. Tools and TMDE required for the maintenance of COMSEC materiel are authorized by appropriate MTOE, TDA, or nontactical telecommunications development projects. They will be obtained per AR 710–2.

d. Repairable exchange procedures for COMSEC materiel are in AR 710–2.

5–16. Evacuation of unserviceable COMSEC materiel

a. COMSEC equipment will be evacuated to the next maintenance level only after a qualified, certified inspector determines that evacuation is required per AR 640–15.

b. Unserviceable COMSEC materiel in CONUS and overseas areas that meets the above criteria will be evacuated through supply channels to the Commander, Bluegrass Army Depot (BGAD), ATTN: COMSEC Account 5B1001, Lexington, KY 40511. The only exception to automatic evacuation of unserviceable materiel is that unserviceable AUTOSEVOCOM equipment will be reported to the Commander, U.S. Air Force Cryptologic Depot, ATTN: LGGCYC, San Antonio, TX 78241, for disposition.

c. Components, assemblies, and parts that have manufacturing defects will be removed from the materiel at the authorized maintenance level. The removal will be reported on SF 368 as a Category II quality deficiency report under DA Pam 738–750. When practical, exhibits (defective components, parts, or assemblies) will be forwarded with the quality deficiency report. Those parts not forwarded will be tagged with DA Form 2402 (Exchange Tag), and held for further disposition instructions.

5–17. Controlled cryptographic items (CCI)

a. CCI are declassified COMSEC items. Accounting and requisition/issued procedures are in AR 710–2.

b. CCI end items must be unkeyed prior to storage when not in operational status or when being turned in through channels for maintenance.

Section IV

Maintenance for Army Aircraft

5–18. Aviation maintenance objective

The objective of Army aviation maintenance is to ensure safe, reliable, and full mission–capable aviation weapons systems. This includes airframes, engines, major components, avionics, aerial weapons, fire control/fire direction items, and other airborne ancillary materiel necessary to support the total aviation weapon system concept. To accomplish these objectives, three levels of aviation maintenance are established: AVUM, AVIM, and aviation depot maintenance.

5–19. Aviation unit maintenance

a. These activities will be staffed and equipped to perform high frequency “on–aircraft” maintenance tasks required to retain or return aircraft to a full mission–capable condition. The maintenance capability of the AVUM is governed by the maintenance allocation chart and limited by the amount and complexity of ground support equipment, facilities required, the number of spaces, and critical skills available. The range and quantity of authorized spare modules, ground support equipment (GSE), TMDE, and components will be consistent with the mobility requirements dictated

by the air mobility concept. Assignment of maintenance tasks to divisional or other (TDA/MTOE) company size aviation units will be based on overall maintenance capability, the requirement to conserve personnel and materiel resources, and air mobility requirements. If the aviation element is less than 10 aircraft, maintenance will normally be limited to scheduled inspections, minor adjustments, and minor repair.

b. ARNG Army Aviation Flight Activity (AAFA) will perform AVUM maintenance. Functions are defined in NGB Pam 750-2. Maintenance beyond the capability of these organizations will be performed by the supporting Army Aviation Support Facility (AASF).

c. The AASF will perform AVUM and limited AVIM maintenance per NGB Pam 750-2. This includes diagnosis, servicing, preventive maintenance intermediate (PMI), phased maintenance (PM), special inspections, aircraft recovery and evacuation, aircraft weighing, maintaining authorized ORF aircraft, minor airframe repair, avionics, and armament repair. These functions are specifically detailed in NGB Pam 750-2. Requests to exceed—

(1) Maintenance authority will be forwarded to the supporting Aviation Classification and Repair Activity Depot (AVCRAD).

(2) Expenditure limits (funds/work hours) will be forwarded to Chief, NGB, NGB-AVN-L, through the supporting AVCRAD.

d. An Aviation Support Facility in the USAR collocated with a supported AVIM unit may be authorized by HQDA to perform intermediate maintenance using tools/equipment authorized to the supported unit. If authorized, the expanded mission will only be in support of collocated Army Reserve aircraft and will be terminated upon movement/inactivation of the collocated AVIM unit.

5-20. Aviation intermediate maintenance

a. AVIM units or activities will—

(1) Furnish mobile, responsive, one-stop maintenance support.

(2) Perform all maintenance functions as designated by the MAC in materiel publications. Authorized maintenance includes replacement and repair of modules and components and repair of end items that can be efficiently accomplished with available skills, tools, and materiel.

(3) Repair materiel for return to user and emphasize support of operational readiness requirements.

(4) Establish a program to support AVUM units by repairing selected items for return to stock when such repairs cannot be accomplished at the AVUM level.

(5) Inspect, troubleshoot, test, diagnose, repair, adjust, calibrate, and align aircraft system modules and components. Module and component disassembly and repair will normally be limited to tasks requiring cleaning and the replacement of seals, fittings, and items of common hardware.

(6) Determine the condition of specified modules and components removed prior to the expiration of the time between overhaul or finite life.

(7) Perform aircraft weight and balance inspections and other special inspections that exceed AVUM capability.

(8) Furnish quick response maintenance support and technical assistance through the use of mobile maintenance support teams and aircraft recovery and evacuation.

(9) Maintain authorized ORF aircraft.

(10) Furnish collection and classification services for serviceable and unserviceable materiel.

(11) Operate a cannibalization point activity under AR 710-2.

b. The aircraft maintenance company within the division will perform AVIM functions consistent with air mobility requirements and conservation of personnel and equipment resources.

c. Additional intermediate maintenance support will be furnished by the supporting nondivisional AVIM unit.

d. Maintenance functions that do not contribute to sustaining air mobility will be assigned to depot maintenance.

e. Unserviceable repairable modules, components, and end items that are beyond the capability of AVIM to repair will be evacuated to depot maintenance.

f. Ground support equipment and TMDE will be evacuated to the appropriate nonaviation maintenance unit when it is beyond the capability of AVIM to repair.

g. Calibration and repair of TMDE will be performed as indicated in AR 750-25, TB 750-25 and TB 43-180.

5-21. Aviation depot maintenance

a. Army aircraft will be maintained and supported to the extent authorized in this regulation and TB 43-0002-3. Army aircraft may be accepted into depot facilities for programmed or unprogrammed maintenance. Accountability will be transferred to the NICP when aircraft are accepted for programmed depot maintenance. Aircraft accepted for unprogrammed depot maintenance will normally be processed on a repair and return-to-user basis.

b. The ARNG AVCRAD will perform AVIM and authorized depot maintenance in support of the ARNG aviation assets. In addition to AVIM maintenance, the AVCRAD will perform aircraft painting, major airframe repair, TASN-A management and AIMI component management. These functions are specifically discussed in NGB Pam 750-2.

Requests to exceed maintenance authority and/or expenditures limits (funds/workhours) will be forwarded to ATCOM, ATTN: AMSAV-MCTP, 4300 Goodfellow Blvd, St. Louis, MO 63120, through CNGB, NGB-AVN-L.

5-22. Programmed depot maintenance

a. Programmed depot maintenance consists of aircraft overhaul, crash and battle damage repair, and modifications.
b. Aircraft will be selected as candidates for overhaul during peacetime under the Aircraft Condition Evaluation Program as shown below:

(1) Aircraft with established overhaul programs will be evaluated using criteria developed by the NMP on an annual basis by aircraft condition evaluation teams fielded by the NMP.

(2) Aircraft condition evaluation data will be used by the NMP to establish a profile index for each evaluated aircraft by serial number and to determine depot overhaul candidates.

(3) Aircraft with the highest profile index will be scheduled for the depot overhaul program first.

(4) Aircraft overhaul programs will be developed by ATCOM based on data, funding, and depot capability. The overhaul program will be finalized and coordinated with MACOMs at the annual Worldwide Aviation Logistics Conference. The NMP will notify MACOMs at least 60 days in advance of the scheduled overhaul date of specific aircraft to be retrograded.

(5) Aircraft scheduled for depot overhaul that subsequently incur crash or battle damage will be reported to the NMP for selection of replacement aircraft.

(6) As a related program to aircraft condition evaluation, the NMP will develop data from DA Form 1352 (Army Aircraft Inventory, Status and Flying Time (RCS DRC 130)) and TAMMS-A to assist in identifying possible depot maintenance candidates.

c. Aircraft in combat areas will be selected for depot maintenance per TM 55-1500-328-25. The NMP will coordinate with the MACOM concerned to determine quantities to be retrograded for overhaul. The MACOM will select aircraft overhaul candidates by aircraft serial number. Retrograde and replacement aircraft schedules will be furnished the MACOM at the annual Worldwide Aviation Logistics Conference.

d. Aircraft requiring crash or battle damage repair will be reported to, and disposed of, per instructions received from the NMP/NICP, using procedures prescribed in TB 43-0002-3.

e. Aircraft programmed for depot overhaul or crash and battle damage repair will have depot modifications installed during the overhaul process. Aircraft requiring depot modifications, which are not scheduled for depot overhaul or crash and battle damage repair, will be modified by contractor or depot modification teams. Depot modification programs for converting aircraft to later series (for example, OV-1C to OV-1D) will normally include overhaul as a part of the total program. Candidates for conversion should also be overhaul candidates whenever practicable. Conversion and modification programs will be coordinated between NMP and MACOM during the Worldwide Aviation Logistics Conference.

f. All applicable documents, forms, and records will be processed per DA Pam 738-751 during depot maintenance. Personnel preparing contract work statements will ensure that the provisions of this publication are included in all applicable maintenance contracts.

5-23. Aircraft parts that have been exposed to fire and/or saltwater immersion

Aircraft parts, components, or assemblies that have been subjected or exposed to fire and/or saltwater immersion will not be reused locally under any circumstances. Such items will be condemned locally, or if considered repairable by competent inspection, returned through maintenance or supply channels for inspection and overhaul. All items that are to be condemned or returned for inspection and overhaul will require a statement on all applicable accompanying documentation, including DD Form 1577 (Unserviceable (Condemned) Tag-Materiel) or DD Form 1577-2 (Unserviceable (Repairable) Tag-Materiel) stating the item has been subjected or exposed to fire and/or saltwater immersion.

5-24. Items removed from crash-damaged aircraft

Extreme caution will be exercised in the reuse of items removed from crash-damaged aircraft or aircraft that have been involved in accidents. Items removed from a crashed aircraft or an aircraft that has been involved in an accident will not be reused regardless of apparent serviceability until such items have been subjected to a thorough inspection.

5-25. Inspection and testing of crash-damaged components and assemblies

a. All functional components and assemblies (for example, engines, transmissions, pumps, valves, generators, and blades) will be subjected to inspections and tests per the inspection and test standards required at the time of overhaul. Components not designed as overhaul items will be inspected and tested per the applicable maintenance manual. An item will either be condemned locally or evacuated to a depot maintenance facility according to the recoverability code assigned to the item.

b. All items that are to be locally condemned will require a completed DD Form 1577. This tag will be annotated to reflect that the item has been removed from a crashed aircraft or an aircraft that has been involved in an accident. Mutilation of condemned aeronautical items will be accomplished per TM 1-1500-328-23.

c. All items that are to be evacuated to a depot maintenance facility will require a statement on all applicable accompanying documentation, including DD Form 1577-2, to the effect that the item has been removed from a crashed aircraft or an aircraft that has been involved in an accident.

5-26. Inspection and testing of structural parts and assemblies of aircraft

Inspection and testing of structural parts and assemblies of aircraft structural parts and assemblies will, at a minimum, require a thorough visual inspection. Major support structures, fittings, attaching points, welds, flight control tubes and links, etc. will be subjected to nondestructive flaw detection tests and dimensional and alignment verifications.

5-27. Shipment of aircraft

Unserviceable items selected for disposal by ATCOM will not be reinstalled in an aircraft. Action will be taken to ensure that the airframe attaching elements of the removed items are protected from deterioration or contamination while awaiting the replacement item. However, if the unserviceable aircraft is to be shipped or transferred off post or station for repair, the unserviceable or interchangeable item must be installed or completely secured to prevent possible damage, deterioration, or contamination during movement of the aircraft. All unserviceable components will be individually tagged with DD Form 1577-2 and suitable entries made in the aircraft equipment records.

5-28. Posting aircraft forms and records

Posting of aircraft forms and records will be per DA Pam 738-751.

5-29. Maintenance training aircraft

a. *Training aircraft.* Maintenance training aircraft are those employed for ground technical training that do not require airborne operations. Training aircraft are further classified as follows:

(1) *Category A.* Aircraft that can be returned to flyable status through minimum maintenance and modification. This category covers aircraft assigned on a temporary basis not to exceed 365 days, to meet special training requirements. Extensions may be granted by ATCOM.

(2) *Category B.* Aircraft that are capable of ground operation if all components are installed. Category B aircraft can be returned to flyable status by depot rebuild or overhaul.

(3) *Maintenance training airframes.* Retired and condemned aircraft used to train maintenance personnel. Aircraft in this category are retired or have been damaged or deteriorated beyond the MEL established in TB 43-0002-3. Classification to maintenance training airframe status results in the aircraft being permanently grounded. Maintenance training airframes will be reported on DA Form 1352.

(4) *Maintenance training devices.* Aeronautical equipment other than Category A or B aircraft, or maintenance training airframes, that are used to facilitate aircraft maintenance training. Items in this category range from uninstalled elements to mockups of major assemblies or functional groups.

b. *Training aircraft responsibilities.*

(1) Commander, ATCOM will—

(a) Provide aircraft for utilization as maintenance training aircraft based upon known requirements and as directed by AMC.

(b) Submit recommendations through AMC to HQDA (DALO-AV) for approval to classify and reclassify aircraft for maintenance training.

(c) Control current inventory of all maintenance training aircraft and distribute maintenance training aircraft to meet training.

(d) Provide required repair parts support and MWO kits for Category A and B maintenance training aircraft to the full extent required to accomplish maintenance prescribed in paragraph 5-22d.

(e) Provide required repair parts support for maintenance training that will ensure accomplishment of the training mission. Serviceable high-dollar value items (for example, engines, transmissions, rotor blades, propellers) are not authorized except when approved by ATCOM.

(f) Provide funding for repair of crash-damaged aircraft for use as a maintenance trainer.

(g) Provide training activities with unserviceable or crash damage components as they become available.

(2) CG, FORSCOM, CG TRADOC, major overseas commanders, and CNGB will—

(a) Present projected fiscal year consolidated requirements for maintenance training aircraft, maintenance trainers, components, and test equipment during the Worldwide Aviation Logistics Conference. Institutional training equipment requirements for the subsequent fiscal year will be obtained from annual requirements presented to HQDA in May-June each year.

(b) Receive, evaluate, and provide command approval or disapproval of all requests for maintenance training aircraft received from subordinate activities.

(c) Ensure that all maintenance training aircraft assigned to subordinate activities are maintained under this regulation.

(d) Determine if crash-damaged or uneconomically repairable aircraft can be exchanged for Category A or B aircraft already assigned to a training activity, prior to repairs being initiated.

(3) Commanders of activities possessing maintenance training aircraft will—

(a) Maintain maintenance training aircraft as prescribed herein.

(b) Report to ATCOM all excess maintenance training aircraft.

(c) Provide monthly reports of all maintenance training aircraft in their possession on DA Form 1352 per AR 700-138.

c. General policy.

(1) Installations' and units' authorized maintenance training aircraft will be designated by HQDA.

(2) Authority for the control, classification, and reclassification of aircraft defined as maintenance training aircraft rests with ATCOM.

(3) A predetermined quantity of aircraft will be assigned to TRADOC as maintenance training aircraft to satisfy initial distribution requirements. Total requirements will be satisfied by subsequent phased deliveries as aircraft become available from production or from the operational fleet.

(4) Category A and B maintenance training aircraft, and aircraft designated as maintenance training airframes, will be reported on DA Form 1352 per AR 700-138.

(5) Uneconomically repairable, crash-damaged, or retired aircraft may be used, when economically feasible, as a source for maintenance training airframes which will (whenever possible) be used as a replacement for Category A and B maintenance training aircraft, which can then be made available for return to flyable status, should a requirement exist. Any item removed from a crash-damaged aircraft for reuse will meet the criteria established by paragraphs 5-26 and 5-27. Final airframe classification will be made by ATCOM using TB 43-0002-3.

(6) Category A and B maintenance training aircraft, when no longer required, will be reported by letter to HQ TRADOC. HQ TRADOC will report excess maintenance training aircraft to HQ ATCOM.

(7) Maintenance training airframes and devices that are no longer needed will be reported to HQ TRADOC. Excess maintenance training airframes and devices will be reported by HQ TRADOC to ATCOM for disposition instructions.

(8) Categories assigned to maintenance training aircraft will not be redesignated without ATCOM approval.

(9) Aircraft items recorded on DA Form 2408-17 (Aircraft Inventory Record), when not required for training purposes on Category B maintenance training aircraft, will be returned to stock using normal supply procedures.

d. Maintenance of training aircraft.

(1) Category A aircraft will be maintained per applicable publications to a standard so that the aircraft can be returned to a completely operational flight status by AVIM within 60 working days. Category A aircraft should meet transfer serviceability standards prior to shipment to or from a designated training activity.

(2) Configuration control of Category B maintenance training aircraft will be maintained through the incorporation of all applicable MWOs, to the extent possible, to ensure that training is consistent with the field operational aircraft system. All systems/components required for program of instruction (POI) will be maintained operational and updated per the latest applicable MWOs. Removal and turn-in of systems/components not required for POI may be approved by ATCOM. Category B aircraft and components will be maintained so they can be returned to flight operational status by depot overhaul or repair. Aircraft transfer standards are not mandatory for transfer to depot or any activity authorized the use of Category B aircraft.

(3) Serviceable components/systems not covered in *d* (2) above will be preserved and periodically inspected, operated per appropriate technical manuals, and represerved.

(4) Components of maintenance training airframes that are not required for training purposes should be removed and returned to depot through normal supply channels. DD Form 1577-2 will be attached to each item. Disposition will be per AR 710-2.

e. Maintenance of "equipment logbook" records.

(1) Equipment logbooks and historical records will be maintained per DA Pam 738-751 and TM 1-1500-328-23, for all training aircraft, maintenance training airframes, and maintenance training devices.

(2) Ground operating time will be recorded on DA Form 2408-13 (Aircraft Status Information Record). A combination of flight time and ground run time will be utilized to determine time change requirements. Requests for time change extensions of components on ground run aircraft may be submitted to ATCOM prior to removal of time change components.

(3) DA Form 2408-18 (Equipment Inspection List) inspections are required on Category A and B aircraft unless a waiver is granted by ATCOM.

f. Controlled substitution.

(1) Controlled substitution of serviceable components from Category A and B maintenance training aircraft to any flyable aircraft is authorized. These components must be determined serviceable or economically repairable by a qualified inspector and must be of proper configuration and have all modifications applied. The component or assembly removed from a Category A or B maintenance aircraft will be replaced with a like component. These actions must receive concurrence by ATCOM.

(2) Controlled substitution of components from maintenance training airframes or maintenance training devices may be made only between other maintenance training airframes or maintenance training devices. Removal or installation of components listed in TB 1-1500-341-01 will call for the submission of DA Form 2410 (Component Removal and Repair/Overhaul Record) per DA Pam 738-751 and TM 1-1500-328-23.

Section V

Maintenance of Rail Materiel

5-30. General

The term "rail materiel" includes motive power, general rolling stock, and special purpose mobile rail materiel owned and operated by the U.S. Army.

5-31. Maintenance policies

Unit, DS, GS, and depot maintenance will be accomplished per the policies set forth in chapters 3 and 4 and this section as supplemented by materiel publications and directives. U.S. Army-owned rail materiel will conform to standards established by Government regulatory bodies in the country where such rail materiel is operated in interchange service and is subject to the rules of such regulatory bodies.

5-32. Maintenance operations

a. DS and GS maintenance.

(1) DS and GS maintenance will be furnished using units by rail transportation companies that may be expanded by Army mobile rail teams. For support of DA utility rail materiel in CONUS where no support companies are available, all functions of DS and GS maintenance will be performed by the mobile rail repair shops (AR 700-53).

(2) The NMP will furnish the services of the mobile rail support shop for DA utility railroads on an "as required" basis and will direct its operation as follows:

(a) Army owned rail equipment will receive mobile rail services free.

(b) Defense supply depots and other DOD agencies may receive mobile shop services on a reimbursable basis.

(3) DA rolling stock moving over interchange in CONUS will have running repairs performed under AR 750-56.

b. Depot maintenance. Depot maintenance will be programmed by the NMP/NICP on the basis of inspections by rail maintenance technicians.

c. Maintenance reporting and recording. Maintenance reporting and recording for Army rail materiel will be under DA Pam 738-750.

d. Installations electing not to use mobile rail support shops. These installations may contract the service to an outside source if cost-effective, or may retain the work in-house if qualified personnel are available and support equipment is authorized.

Section VI

Maintenance of Communications Systems and Materiel Assigned to USAISC

5-33. General guidance

a. This section applies to maintenance of Army fixed and other USAISC-assigned telecommunications networks, systems, and automation equipment to include, but not limited to, the following:

(1) Army portion of the Defense Communications System.

(2) Theater Communication System (Army).

(3) Base (post, camp, and station) communications automation and printing equipment.

(4) Air defense communications systems (as assigned).

(5) Army command and control networks.

(6) American Forces Radio and Television Service distribution systems.

(7) Army military affiliate radio systems.

(8) Army worldwide leased telecommunications facilities.

(9) INSCOM nontactical communications materiel.

b. The CG, USAISC is responsible for—

(1) Maintenance support of all Army information systems above corps level not assigned by HQDA to other commands and agencies to include those listed in a above and functions listed in AR 10-13.

(2) The organization and operation of area maintenance and supply facilities.

(3) Maintenance support teams.

(4) Forward area support teams.

(5) COMSEC logistics support facilities.

(6) Module and repair activities required for dedicated retail logistics support of organic communications–electronics (C–E) materiel and other electronics materiel as assigned.

5–34. Maintenance policies

a. The CG, USAISC will approve maintenance levels authorized for all USAISC units and C–E fixed facilities. The approved maintenance levels are contained in the appropriate unit authorization document.

b. Maintenance will be performed by each unit or site, up to the level of maintenance authorized, per the maintenance allocation chart, and within the constraints of available resources. When approved by the CG, USAISC, COMSEC logistics support facilities (CLSF) will exchange and repair modules and PCBs instead of evacuating them depots or other external support facilities.

c. USAISC is responsible for operation of a dedicated retail logistics support system for all BASOPS C–E systems and materiel unique to the command. USAISC C–E materiel may be supported by another MACOM or military department facility when it is economically beneficial and responsive to USAISC operational requirements or established Defense Communications Agency (DCA) restoration criteria.

d. TMDE repair and calibration support will ensure attainment of the minimum goal of 95 percent TMDE availability and provide services responsive to USAISC operational requirements or established DCA restoration criteria.

5–35. Maintenance facilities

a. Unit level maintenance at small fixed facilities will be limited to operator maintenance. For other than operator maintenance these facilities must rely on support from maintenance support teams, forward area support teams, area maintenance and supply facilities, or other support maintenance facilities as designated in appropriate logistics and mission support plans.

b. The DS level of maintenance is normally authorized at medium to large manned C–E fixed self-sufficient facilities.

c. GS maintenance is normally authorized at a large facility and/or isolated C–E site or activity that must be provided with a high degree of self-sufficient maintenance. Factors supporting the performance of GS on site are type of mission, location, equipment density, and nature of materiel. Organic repair of unserviceable modules and PCBs and hardwired components is accomplished at this level to the maximum extent authorized by the MAC and approved by HQ USAISC.

d. SRA maintenance functions coded “L” per the maintenance allocation chart are performed by maintenance support facilities selected by the CG, USAISC and approved by HQDA (DALO–SMM). Quick reaction maintenance support to supported activities is furnished through maximum use of ORF items.

e. Depot maintenance is not authorized to be performed by USAISC units. USAISC C–E materiel will be evacuated to DA designated CONUS depots, to include authorized manufacturer and contractor operated maintenance facilities, for the accomplishment of depot level maintenance. Depot level maintenance may be performed at the unit’s location by depot level maintenance repair teams.

5–36. Area maintenance and supply facility

FM 29–23 and FM 29–24 establish the AMSF doctrine for GS facilities managed and operated by USAISC. AMSF is assigned the mission of furnishing centralized retail supply and maintenance support of USAISC telecommunications materiel, and other C–E materiel as assigned. This includes—

a. Furnishing maintenance support for all assigned Army communications materiel above corps level that are not assigned by HQDA to other commands and agencies in overseas areas.

b. Furnishing maintenance support teams to perform scheduled and emergency backup maintenance and technical assistance and instruction at the C–E facility or unit location that is beyond the unit’s capability and authorization.

c. Maintaining an authorized stockage list of C–E supplies and C–E repair parts.

d. Maintaining approved stock record account (project support account) to receive, store, and issue items on C–E bills of materiel.

e. Maintaining an approved stock of ORF under AR 710–1 and AR 710–2 in support of fixed facilities and area maintenance and supply facility maintenance programs under FM 29–35.

f. Maintaining stock record accounts under AR 710–2 and USAISC directives.

g. Maintaining a capability to provide a training base for specialized C–E material, and to respond to emergency assistance requests from supported units.

h. Assisting supported units in correcting faults found during performance evaluations and inspections. AMSF also supports unit maintenance programs so as to improve and maintain the operational availability of the C–E systems and materiel.

i. Operating a module and PCB repair section capable of repairing unserviceables through the use of microelectronics repair methods and automatic test equipment.

j. Repairing peripheral materiel, such as power and environmental, when not supported by the facility engineer or other area support maintenance units.

5-37. Maintenance support team

The maintenance support team is that activity of a USAISC DS or GS maintenance facility that brings mobile maintenance support to CE fixed facilities or other USAISC units on a scheduled, emergency, or on-call basis. The C-E maintenance support teams are a functional responsibility of AMSF and other authorized command maintenance organizations; COMSEC maintenance support teams will be furnished by the CLSF.

5-38. Forward area support team

The forward area support team is a remotely located extension of the AMSF that performs scheduled and emergency backup maintenance and technical assistance at the C-E fixed facility or unit location.

5-39. Quality assurance

All USAISC DS and GS maintenance support facilities will institute effective quality control procedures in carrying out HQDA and USAISC quality assurance programs. Quality control must be sufficiently independent of maintenance operations to ensure that inspections are not constrained.

Section VII

Maintenance of Nontactical Vehicles (NTV)

5-40. Maintenance operations

a. Authorized maintenance may be accomplished in transportation motor pool shops, IMMA, local commercial shops, or other Government maintenance activities as jointly determined by the motor pool manager and the IMO. In all cases, warranties are to be used to the maximum extent possible. Detailed policies on management of NTV are in AR 58-1.

b. Operator inspection and service consists of inspecting and detecting malfunctions that make the vehicle unsafe or unserviceable and includes minor or simple parts replacement and servicing (water, fuel, tires, and battery).

c. At those installations having consolidated maintenance shops, all maintenance is the responsibility of the IMO. NTV maintenance may be performed in the transportation motor pool shop, but will normally be performed in the consolidated shops.

5-41. Modifications

Modifications of NTV are covered in AR 58-1 and TM 38-600.

5-42. Repair parts supply

a. Repair parts for NTV are obtained under the provisions of AR 710-2.

b. Cannibalization of uneconomically repairable vehicles prior to turn-in to DRMO is limited to those serviceable parts immediately needed to repair inoperable vehicles.

c. Major commanders in overseas areas may authorize controlled exchange of repair parts from nontactical vehicles only when those repair parts are not otherwise available.

5-43. Operational readiness float (ORF)

ORF support of nontactical vehicles is not authorized.

Section VIII

Maintenance of Training Aids and Devices and Audiovisual Equipment and Systems

5-44. Training aids and devices

This section provides maintenance policy for training aids and devices. It supplements policies in AR 700-127 and AR 25-1. Training aids and devices used by the U.S. Army can be categorized as shown below.

a. Training aids and devices assigned to a MTOE unit are type classified and include simulators or end items.

b. Training aids and devices managed by TDA activities include—

(1) Non-type classified training aids and devices developed or commercially acquired to support general military training and training on more than one type item of materiel. These are usually assigned to and maintained by training and audiovisual support centers (TASC) for loan to units and activities.

(2) Type classified training aids and devices used to support a special training requirement.

c. Maintenance policy is as follows:

(1) Type classified and non-type classified training aids and devices will be maintained per this regulation.

(2) Equipment used for training for the original purpose (operator/crew training) will be maintained to the Army maintenance standard outlined in paragraph 3-1 *a* and turn-in/transfer standard in paragraph 4-6.

(3) Equipment (end items and major assemblies) that is frequently disassembled and assembled for instructional purposes will not be maintained to Army maintenance standard. Additionally, this equipment will be transferred or turned into the wholesale system under condition code "F" and not at -10/-20. If required for reissue, equipment will be routed through depot maintenance before issue. Equipment will remain disassembled for instructional purposes.

(4) A maintenance plan as part of the logistic support plan will be developed and fielded with the materiel. Commercial off-the-shelf materiel procurement will include a maintenance support plan or justification for contract maintenance or interservice support.

(5) Type classified training aids and devices which are identified on MTOE or TDA documents will be maintained per the MAC. Support requirements beyond the user's authority or capability will be referred to the supporting IMMA.

(6) Locally fabricated training aids and devices will be maintained by the TASC. Maintenance above the capability of the TASC will be referred to the supporting IMMA.

(7) User commands are responsible for programming and budgeting funds for contract maintenance support for all training aids and devices under their control.

(8) Depot level maintenance will be furnished by AMC.

5-45. Audiovisual equipment and systems

This paragraph provides maintenance policy for audiovisual equipment and systems. It supplements policies in AR 700-127 and AR 108-2.

a. Audiovisual materiel includes photographic, television, audio, and graphic art items that furnish an audiovisual product or service.

b. Type classified audiovisual materiel is assigned to U.S. Army Communications-Electronics Command for management, fielding, and logistics support.

c. Audiovisual materiel assigned to an audiovisual facility or other TDA activity, including broadcast radio and television, may be developed or commercially acquired. The logistics supportability of commercially acquired materiel is the responsibility of the procuring activity. Local procurement will be coordinated with the local USAISC supporting activity for consolidation of contracts for maintenance services. Broadcast radio and television materiel and systems will be procured, managed, and supported by the Television Audio Support Activity, USAISC.

d. Maintenance policy is as follows:

(1) A maintenance plan as part of the logistic support plan will be developed and fielded with the materiel. Commercial off-the-shelf materiel procurement will include the equivalent of a maintenance support plan or justification for contract maintenance or interservice support.

(2) Type classified audiovisual materiel will be maintained per the MAC. Support requirements beyond the user's authority or capability and all non-type classified audiovisual materiel will be referred to the supporting USAISC, Director of Information Management (DOIM).

(3) Maintenance of audiovisual equipment and activities integrated with training device support activities may, at the option of the MACOM, be managed by the training community. Otherwise, contract requirements will be submitted to the supporting DOIM, who will coordinate the support.

(4) User commands are responsible for programming and budgeting funds for contract maintenance support for all audiovisual materiel under their control. Funds will be made available by the user to the supporting DOIM to support its contract efforts.

Section IX

Maintenance of Conventional Ammunition, Nuclear Weapons, and Nuclear Weapons Materiel

5-46. General guidance

a. Conventional ammunition.

(1) Ammunition maintenance consists of all actions necessary to retain ammunition in, or restore it to, a full, mission capable condition.

(2) Provisions must be made to accomplish maintenance at the storage location to the maximum extent possible.

(3) The maintenance program of an activity will be based on requirements determined by theater inventory control point/national inventory control point (ICP/NICP). The maintenance to be performed by an activity will be based on the activity's assigned mission or as directed by the NMP.

(4) The condition code of ammunition will be determined by surveillance inspection or as directed by NMP.

b. Nuclear weapons and nuclear weapons materiel. Requirements for nuclear weapons and nuclear weapons materiel are contained in AR 700-65.

5-47. Maintenance policies

This section supplements chapter 4 for unit, DS, and GS level operations. Depot policies are in AR 750-2.

- a.* Unit maintenance will be performed by all activities having conventional ammunition on hand, including using units. Unit maintenance is performed to prevent the deterioration of ammunition due to rough handling and exposure.
- b.* Direct support maintenance will be performed by ammunition companies. DS maintenance on ammunition will include inspection, test, service (preservation and packaging), and repair of stocks stored by the ammunition companies. Ammunition companies normally perform a greater volume of DS maintenance when operating in a rear, semipermanent installation where more time, materiel, and personnel are available. The companies are also responsible for providing technical assistance to using units on their maintenance responsibilities.
- c.* Conventional ammunition renovation detachments will normally furnish GS maintenance on conventional ammunition in large ammunition supply points or depot complexes located in the communications zone. However, when practical, they may be deployed forward to perform maintenance rather than evacuate unserviceable ammunition.
- d.* Depot maintenance on ammunition consists of actions primarily comprised of renovation, modification, or reconfiguration. Depot maintenance will normally not be performed in an active theater; it is usually performed in CONUS or overseas theaters of long standing. Selected overseas installations coordinate with AMC to perform depot maintenance that augments the procurement program.
- e.* Maintenance reporting for conventional ammunition will be under DA Pam 738-750 and AR 700-22.

5-48. Maintenance planning

a. Conventional ammunition units will perform maintenance and demilitarization of ammunition only after receipt of a properly validated work authorization. Work authorization can be a DA Form 2407 (Maintenance Request), DA Form 2415 (Endorsement to Ammunition Condition Report), or letter of authorization. An assignment sheet (work order) can be added where a validated work authorization does not furnish sufficient information. The assignment sheet will be used within the organization and will normally provide for, but is not limited to, the following:

- (1) The scope of the maintenance work.
- (2) The lot number and quantity of rounds to be processed.
- (3) The lot number and quantity of replacement parts or components to be used.
- (4) Special instructions on inspection, operations, hazards, and disposition of unserviceable components resulting from operations.
- (5) Operations that must be performed to process the material, consisting of replacing parts, painting, changing nomenclature, adding a suffix, preparing data cards, and so forth.
- (6) Materials to include quantity to complete the work.

b. DMWRs for renovation or disposal of ammunition are composed of a series of sheets in the form of a pamphlet. Each sheet is an operational study of the technical features of the operation to be accomplished. The DMWR is approved and issued by the Director of Maintenance, U.S. Army Armament, Munitions, and Chemical Command for a variety of installations operating on a comparatively large production basis. The DMWR will be used as a guide for the ammunition officer preparing the details and procedures for completing the work in a theater of operation. DMWRs and LOIs are the only procedural guidance authorized for performance of maintenance and demilitarization at installations. Exceptions to this policy must have the approval of the NMP.

Section X

Maintenance of Test, Measurement, and Diagnostic Equipment (TMDE)

5-49. General policies

- a.* This section provides policy for the support of Army TMDE.
- b.* AMC will furnish calibration and repair support for general and selected special purpose TMDE under AR 750-43, TB 750-25 and TB 43-180.

5-50. Support concept

The support concept for general purpose TMDE will make maximum use of existing assets and Army calibration and repair system standards.

5-51. TMDE support and management

TMDE repair support will normally be based on the concept that repair should be accomplished by the element designated in TB 43-180 as being responsible for calibration support. TMDE support will be as follows:

a. All TMDE owners or users will do unit level maintenance on organic TMDE. General purpose TMDE and selected special purpose TMDE repair support will be obtained from the area calibration repair center (ACRC) responsible for supporting the geographic area where the TMDE owner or user is located. Repair support for the remaining special purpose TMDE will be obtained from the maintenance organization responsible for maintaining the associated system or end item. Medical activities will refer to AR 40-61.

b. DS, GS, and AVIM units will do unit maintenance on organic TMDE and furnish support services for organic and supported units special purpose TMDE.

c. Complex TMDE requiring multilevel maintenance support will be repaired and calibrated using assets from all required levels.

Section XI

Maintenance of Automatic Data Processing Equipment (ADPE)

5-52. Logistic support policy for ADPE

a. Embedded ADPE. All embedded tactical ADPE will be maintained using the Army maintenance system. Embedded ADPE are systems or components that are specifically designed and produced to perform functions as an integrated part of non-information systems. Embedded ADPE have no general purpose capability outside the system of which it is a part and are not separable for other uses without redesign or modification.

b. Maintenance specific to the Tactical Army Combat Service Support Computer System (TACCS).

(1) The user/operator is responsible for basic PMCS. Diagnosis will be performed by the unit automation information systems (AIS) maintenance personnel in coordination with the Combat Service Support Automation Management Office (CSSAMO). Unit AIS maintenance personnel will turn in faulty components to the SSA.

(2) The SSA will issue a replacement to the unit AIS maintenance personnel and work order the faulty component to the supporting DS maintenance activity for fault verification, alignments, and/or adjustments.

(3) After screening at the DS activity, serviceable components are returned to the SSA, and unserviceable components are evacuated to the contractor/depot for repair and return to the SSA on a non-reimbursable basis for the life-cycle of TACCS.

c. Maintenance specific to all ADPE used to support tactical STAMIS applications.

Tactical STAMIS also include the Standard Army Maintenance System-installation/Table of Distribution and Allowances (SAMS-I/TDA), Standard Installation/Division Personnel System-3 (SIDPERS-3), Standard Property Book System-Redesign-I/TDA (SPBS-R-IITDA), and Standard Army Ammunition System-4 (SAAS-4).

(1) The unit AIS maintenance personnel in coordination with the CSSAMO will support the user/operator in diagnosis and repair of faulty components. Failed LRUs will then be turned in to the supporting SSA.

(2) Software related problems will be resolved in coordination with the supporting CSSAMO, Personnel Automation Section (PAS), or other appropriate automation office.

(3) The SSA will issue a replacement LRU to the unit AIS maintenance personnel from on-hand SCX assets and work order the faulty LRU to the supporting DS maintenance activity for fault verification, alignment and/or adjustment, and repairs not requiring repair parts. If the DS maintenance activity is able to correct the fault, the LRU will be returned to the SSA. If the DS maintenance activity is unable to repair the LRU without repair parts, it will contact its designated depot /FRA Customer Service Office. The CSO, within the guidelines for MEL defined in paragraph 4-5, will provide disposition instructions which may include warranty guidance.

d. Any computers procured by a MACOM to support a tactical STAMIS may be repaired using these procedures, provided that the MACOM has coordinated and funded that support with the depot/FRA through the appropriate AMC MSC in accordance with paragraph 4-44. Following appropriate approval, the CSO will maintain information on systems that are authorized repair under these procedures.

5-53. Base operations (BASOPS) ADPE

ADPE obtained for BASOPS support through the Information Management Area (IMA) process is supported through the Directors of Information Management/Deputy Chief of Staff for Information Management organizations. Although these systems are not part of tactical automation, maintenance may be obtained through the depot after coordination with the appropriate AMC MSC.

Section XII

Maintenance of Organizational Clothing and Individual Equipment (OCIE)

5-54. Maintenance policy

a. OCIE issued to soldiers will be inspected to determine serviceability as required by AR 700-84 and DA Pam 710-2-1. Normal maintenance, which would reasonably be expected to be performed within a unit, must be performed by the individual to whom the organizational clothing or equipment is assigned. This maintenance includes cleaning, spot removal, repair of tears or rips, and replacement of buttons.

b. Each installation or activity will ensure clothing and materiel beyond organizational repair capability is turned into a central location for repair and return to stock or classification as unserviceable and turn-in to DRMO.

c. The USPFO may authorize negotiation of local contracts for the maintenance of clothing and equipment for the ARNG as follows:

- (1) Minor alterations and repairs of individual clothing.
- (2) Minor repairs of USPFO stocks to reclassify items to a serviceable status for reissue.
- d. Major alterations for the purpose of modifying items will require prior approval of Chief, National Guard Bureau.
- e. Laundry and dry cleaning services. Laundry and dry cleaning services are authorized as follows:
 - (1) Laundry services in support of AT per NGB Pam 350–1.
 - (2) Laundry and dry cleaning services in support of IDT. These services should be obtained at the lowest possible cost for the following items:
 - (a) White organizational clothing and equipment issued to medical and food service personnel.
 - (b) Sheets, pillow cases, and mattress covers.
 - (c) USPFO stocks of serviceable individual and organizational clothing and equipment prior to reissue.
 - (d) Individual clothing for interment of deceased personnel when burial is authorized from Federal funds.
 - (e) Blankets and sleeping bags.
 - (f) Army band distinctive uniforms as authorized by CTA 50–903.

5–55. Maintenance expenditure limits

Maintenance expenditure limits can be found in TB 43–0002–27.

Section XIII

Maintenance of Tactical Intelligence and Electronic (IEW) Materiel

5–56. General

- a. This section applies to the maintenance of army tactical EW equipment, including MTOE, TDA, and loaned materiel. Tactical EW equipment includes but is not limited to, the following:
 - (1) Army EW equipment fielded to corps, divisions, armored cavalry regiments, brigades, and battalions.
 - (2) INSCOM tactical EW equipment.
 - (3) MACOM developed, procured, and fielded EW equipment, including non-developmental items (NDI) and commercial off-the-shelf (COTS) items.
- b. The CG, AMC, is responsible for the support of Army EW materiel with the U.S. Army CECOM Intelligence Materiel Management Center (USACIMMC) being designated as the Army Lead Army Organization for tactical EW logistics sustainment.
- c. The EW GS regional support center (RSC) is an integrated repair activity which provides the field with a dedicated support structure for low density EW systems.
- d. Joint operations equipment developed for special operations forces units is exempt from the requirements of this section.

5–57. IEW maintenance policies

- a. USACIMMC has single point responsibility within the Army for EW logistics sustainment. As part of this responsibility, all sustainment contracts will be consolidated under the control of USACIMMC. Centralized support for EW materiel will be extended to all fielded systems including systems fielded for prototyping analysis, independent of current level of acquisition management. The support includes hardware and soft ware sustainment resources supporting developmental, NDI, and COTS systems.
- b. The emerging generation of EW systems requires a sustainment concept that provides for repair as far forward on the battlefield as possible. The RSC provides this support to the field. System and maintenance software troubleshooting and repair, along with a reconfiguration capability, will be integrated into the RSC whenever possible.

5–58. IEW unit maintenance

- a. EW unit maintenance personnel are authorized by TOE to perform unit and DS levels of maintenance. This typically includes replacement of LRUs, circuit card assemblies (CCAs), and piece parts when authorized by the MAC.
- b. EW maintenance activities are authorized to establish and maintain PLL or shop stocks, per AR 710–2, for repair parts supporting EW equipment repair.
- c. PLLs and shop stocks will be maintained using the unit level logistics system (ULLS) and SAMS, respectively.
- d. Tools and TMDE required for the maintenance of EW materiel are authorized by appropriate MTOE, TDA, technical manual, or letter authorization. Materiel will be obtained per AR 710–2.
- e. Maintenance requirements beyond the unit level require a maintenance request to be processed through the unit's DS SAMS to the GS RSC.

5–59. IEW GS RSC maintenance

The RSC will centralize EW maintenance management and maximize integration of the soldier and contractor/civilian

regional support. The RSC will provide maintenance support for items not reparable at the EW unit level. It is a tailored activity, based on the units and equipment supported in the regional area.

Appendix A References

Section I Required Publications

AR 5-9

Intraservice Support Installation Area Coordination. (Cited in paras 2-16, 2-19, 3-1, and 4-19.)

AR 37-1

Army Accounting and Fund Control

AR 40-61

Medical Logistics Policies and Procedures. (Cited in paras 3-3, 5-51 and table B-9.)

AR 200-1

Environmental Protection and Enhancement. (Cited in para 2-17, 2-30.)

AR 220-1

Unit Status Reporting. (Cited in para 3-2 and 4-43.)

AR 700-65

Nuclear Weapons and Nuclear Weapons Materiel. (Cited in para 5-46.)

AR 700-138

Army Logistics Readiness and Sustainability. (Cited in paras 3-8, 3v9, 4-10, 4-39, 4-43 and 5v29.)

AR 700-139

Army Warranty Program Concepts and Policies. (Cited in para 2-17, 4-37.)

AR 710-2

Supply Policy Below the Wholesale Level. (Cited in paras 2-28, 3-11, 4-1, 4-4, 4-8, 4-21, 4-39, 4-43, 5-15, 5-17, 5-20, 5-29, 5-36 and 5-42.)

AR 710-3

Asset Transaction Reporting System. (Cited in para 4-39, 4-43 and 4-44.)

AR 725-50

Requisitioning, Receipt, and Issue System. (Cited in paras 3-2, 4-39 and 4-45.)

AR 750-2

Army Materiel Maintenance Wholesale Operations. (Cited in paras 3-4, 3-14, 5-1, 5-11, 5-20 and 5-47.)

AR 750-43

Army Test, Measurement, and Diagnostic Equipment (TMDE). (Cited in para 2-28, 3-1 and 5-49.)

DA Pam 710-2-1

Using Unit Supply System (Manual Procedures). (Cited in paras 4-21 and 4-39.)

DA Pam 710-2-2

Supply Support Activity Supply System Manual Procedures. (Cited in paras 4-8, 4-21 and 4-39.)

DA Pam 738-750

Functional Users Manual for the Army Maintenance Management System (TAMMS). (Cited in paras 3-1, 4-6, 4-10, 4-37, 4-42, 5-9, 5-12, 5-32 and 5-47.)

DA Pam 738-751

Functional Users Manual for the Army Maintenance Management System-Aviation (TAMMS-A). (Cited in paras 2-28, 3-1, 4-6, 4-10, 4-22, 4-36 and 5-22.)

DA Pam 750-13

Maintenance of Supplies and Equipment Operating Guide for TDA Support Maintenance Activities. (Cited in paras 2-17 and 3-12.)

Section II**Related Publications****AR 5-1**

Army Management Philosophy

AR 5-3

Installation Management and Organization

AR 12-series

Security Assistance

AR 70-series

Research, Development, and Acquisition

AR 71-2

Basis of Issue Plan (BOIP) Qualitative and Quantitative Personnel Requirements Information (QQPRI)

AR 200-2

Environmental Effects of Army Actions

AR 380-series

Security

AR 381-143

Logistics Policies and Procedures

AR 385-30

Safety Color Code Markings and Signs

AR 420-18

Facilities Engineering Materiels, Equipment, and Relocatable Building Management

AR 700-127

Integrated Logistics Support

AR 700-132

Joint Oil Analysis Program (JOAP)

AR 702-3

Army Materiel Systems Reliability, Availability, and Maintainability

AR 735-5

Policies and Procedures for Property Accountability

DA Pam 351-4

US Army Formal Schools Catalog

DA Pam 570-560

Staffing Guide for U.S. Army Reserve Technicians

DA Pam 750-35

Functional Users Guide for Motor Pool Operations

FM 43-5

Unit Maintenance Operations

FM 43-11

Direct Support Maintenance Operations (Non-Divisional)

FM 43-12

Division Maintenance Operations

FM 43-20

General Support Maintenance Operations

SB 700-20

Army Adopted/Other Items Selected for Authorizations/List of Reportable Items

SB 710-1-1

Standard Study Number System and Replacement Factors

TB 38-750-2

Maintenance Management Procedures for Medical Equipment

TB 43-180

Calibration and Repair Requirements for the Maintenance of Army Materiel

TB 43-0106

Aeronautical Equipment, Army Oil Analysis Program (AOAP)

TB 43-0144

Painting of Watercraft

TB 55-1900-201-45/1

Guide to Army Watercraft Survey Inspections, Repair Procedures and Repair Specifications Preparation

TB 55-1900-205-24

Watercraft Information and Reporting System (WIRS) Data Collection for Configuration Control

TB 750-25

Maintenance of Supplies and Equipment: Army Test, Measurement, and Diagnostic Equipment (TMDE) Calibration and Repair Support Program

TM 9-2610-200-14

Operators, Unit, Direct Support and General Support Maintenance Manual for Core Maintenance Repair and Inspection of Pneumatic Tires and Inner Tubes

TM 1-1500-328-23

Aeronautical Equipment Maintenance Management Policies and Procedures

TM 55-2620-200-24

Inspection, Maintenance Instructions, Storage, and Disposition of Aircraft Tires and Inner Tubes

Section III**Prescribed Forms****DA Form 5480-R**

Maintenance Request and Assignment Register. (Prescribed in para 4-20.)

Section IV**Referenced Forms****DA Form 1352**

Army Aircraft Inventory, Status, and Flying Time

DA Form 2028

Recommended Changes to Publications and Forms

DA Form 2402

Exchange Tag

DA Form 2404

Equipment Inspection and Maintenance Worksheet

DA Form 2405

Maintenance Request Register

DA Form 2406

Materiel Condition Status Report

DA Form 2407

Maintenance Request

DA Form 2408-13

Aircraft Status Information Record

DA Form 2408-17

Aircraft Inventory Record

DA Form 2408-18

Equipment Inspection List

DA Form 2415

Ammunition Condition Report

DA Form 3254-R

Oil Analysis Recommendation and Feedback

DA Form 3266-1

Army Missile Materiel Readiness Report

DD Form 1577

Unserviceable (Condemned) Tag-Materiel

DD Form 448

Military Interdepartmental Purchase Request

DD Form 1577-2

Unserviceable (Reparable) Tag-Materiel

DD Form 2266

Information for Hometown News Release

SF Form 368

Product Quality Deficiency Report

Appendix B**Army-Authorized Equipment Maintenance Missions****B-1. Tables**

EMMs will be assigned to installations and SMMA by DCSLOG. Table B-1 is an index that lists the table for each responsible MACOM and agency. Tables B-2 through B-15 list installations and activities assigned EMMs and show the particular EMMs assigned. SMMA are indented under the parent installation.

B-2. Codes

The letter code in the EMM column of tables B-2 through B-15 are the EMMs assigned to each installation or

activity. Refer to table B–16 and/or to DA Pam 738–750, table B–18 for a description of each EMM code, or Primary Equipment Category Code (ECC).

Table B–1
Index of Tables

Table	Command Responsibility	Table	Command Responsibility
B–2	U.S. Army Information Systems Command (USAISC)	B–10	U.S. Army Military District of Washington (MDW)
B–3	U.S. Army Materiel Command (AMC)	B–11	Military Traffic Management Command (MTMC)
B–4	U.S. Army Corps of Engineers (USACE)	B–12	U.S. Army Training and Doctrine Command (TRADOC)
B–5	Office, Deputy Chief of Staff for Personnel (ODCSPER)	B–13	United States Army, Europe/Seventh Army (USAREUR/7th Army)
B–6	Office, Deputy Chief of Staff for Operations (ODCSOPS)	B–14	U.S. Army Pacific (USARPAC)
B–7	Eighth United States Army (EUSA)	B–15	U.S. Army South (SOUTHCOM)
B–8	U.S. Forces Command (FORSCOM)		
B–9	U.S. Army Medical Command (HSC)		

Table B–2
USAISC (Note 1)

Installation (activity) and location	UIC	EMM (DA Pam 738–750)
DOL Fort Ritchie, MD	W065AA	H, J, K (Note 2), P, Q, S, T, U, V
Pentagon Telecommunications Center, COMSEC RX and Maintenance Activity, Pentagon, Arlington, VA	WOPLAA	J
Theater Comsec Logistics Support Center, Europe, Worms, Germany	W1WTAA	J

Notes:

1. Maintenance of assigned electronic and communication equipment is the responsibility of USAISC (AR 10–13) but may be supported by the host command IMMA through an ISSA.
2. TMDE unique to USAISC by agreement with AMC.

Table B–3
ANC (See note)

Installation (activity) and location	UIC	EMM (DA Pam 738–750)
Anniston Army Depot (AD), AL	WOLXAA	A, H, J, K, N, P, Q, R, S, T, U, V, W, X
Cold Region Test Center, Fort Greeley, AK	W041AA	A, F, G, H, J, K, N, P, Q, S, T, U, V, W, X
Corpus Christi AD, TX	WOMUAA	A, H, P, W, V, X
Dugway Proving Ground, UT	W30MAA	A, D, E, F, G, H, J, K, N, P, Q, R, S, T, U, V, W, X
Electronic Proving Ground, Fort Huachuca, AZ	W04YAA	A, J, K
Fort Monmouth, NJ	WOWCAA	E, D, F, G, H, J, K, N, P, Q, T, U, V, W, X
Jefferson Proving Ground, IN	W04ZAA	D, E, F, G, H, J, K, N, P, Q, R, S, T, U, V, W, X
Letterkenny AD, PA	WOL6AA	A, E, H, J, K, N, P, Q, R, S, T, U, V, W, X
Blue Grass AD, KY	WOL7AA	H, N, P, Q, R, S, T, U, V, W, X
Army Research Lab, Watertown, MA	W26207	J, K, N, P, Q, S, T, U, V, W, X, Y
Belvoir Research, Development and Engineering Center, Fort Belvoir, VA	W04LAA	F, G, H, J, K, L, N, P, Q, S, T, U, V, W, X
McAlester Army Ammunition Plant, OK	W39OAA	N, P, Q, S, T, U, V

Table B-3
ANC (See note)—Continued

Installation (activity) and location	UIC	EMM (DA Pam 738-750)
Natick Research, Development and Engineering Center, MA	W038AA	J, K, N, P, Q, S, T, U, V, W, X
Pine Bluff Arsenal, AR	WOK4AA	F, G, H, J, K, N, P, Q, S, T, U, V, W, X
Pueblo AD, CO	WOMBAA	H, N, P, Q, S, T, U, V, W, X
Red River AD, TX	WOMCAA	H, J, K, M, N, P, Q, S, T, U, V, W, X
Redstone Arsenal Support Activity, AL	WOWFAA	A, B, C, D, E, F, G, H, J, K, N, P, Q, S, T, U, V, W, X
Rock Island Arsenal, IL	WOK8AA	A, H, J, K, N, P, Q, S, T, U, V, W, X
Sacramento AD, CA	WOMDAA	H, J, K, N, P, Q, S, T, U, V, W, X
Savanna AD, IL	WOMEAA	H, J, K, L, N, P, Q, R, S, T, U, V, W, X
Seneca AD, NY	WOMGAA	H, J, K, L, N, P, Q, S, T, U, V, W, X
Sierra AD, CA	WOMJAA	A, G, H, J, K, N, P, Q, R, S, T, U, V, W, X
Tobyhanna AD, PA	WOMLAA	H, J, K, N, P, Q, S, T, U, V, W, X
Tooele AD, UT	WOMMAA	H, J, K, M, N, P, Q, S, T, U, V, W, X
Umatilla Depot Activity, OR	WOMNAA	H, J, K, N, P, Q, S, T, U, V, W, X
Intelligence Materiel Management Center, Vint Hills Farm Station, VA	W01NAA	H
CECOM Signal Warfare Center, Vint Hill Farm Station, VA	W4G801	J
Watervliet Arsenal, NY	WOK9AA	H, N, P, Q, S, T, U, V
White Sands Missile Range, NM	W04WAA	A, B, C, D, E, H, J, K, N, P, Q, R, S, T, U, V, W, X
Yuma Proving Ground, AZ	W04XAA	A, D, E, F, G, H, J, K, N, P, Q, R, S, T, U, V, W, X

Notes:

AMC is responsible for all calibration and repair of TMDE except special purpose.

Table B-4
USACE

Installation (activity) and location	UIC	EMM (DA Pam 738-750)
Cold Regions Research Laboratory, NH	W032AA	D, E, F, G, H, J, K, P, Q, S, T, U, V, W, X

Table B-5
ODCSPER

Installation (activity) and location	UIC	EMM (DA Pam 738-750)
West Point Military Reserves, West Point, NY	W1FBAA	D, E, H, J, K, N, P, Q, S, T, U, V, W, X

Table B-6
ODCSOPS

Installation (activity) and location	UIC	EMM (DA Pam 738-750)
Defense Language Institute, English Language Center, Lackland AFB, TX	W13ZAA	J, K
Defense Language Institute, Foreign Language Center, Presidio of Monterey, CA	W21CAA	J, K

Table B-7
EUSA

Installation (activity) and location	UIC	EMM (DA Pam 738-750)
6th Ordnance Bn, Taejon, Korea	WETZAA	R
34th Area Spt Gp, Pusan, Korea	W35JAA	H, L, P, Q, S, V, W, X, Z
20th Area Spt Gp, Taegu, Korea	W314AA	H, P, Q, S, V, W, X, Z
23rd Area Spt Gp, Pyongtaek, Korea	W315AA	A, E, H, J, P, Q, S, V, W, X, Z
501st Corps Spt Gp, Seoul, Korea	W3BPAA	E, H, J, P, Q, S, V, W, X, Z
U.S. Army MSC-K, Waegwan, Korea	W0C3AA	D, E, F, G, H, J, K, N, P, Q, S, T, U, Z
18th MEDCOM, Seoul, Korea	W3JYAA	K, O, S
U.S. Army Pusan Storage Facility	W397AA	L, Z

Table B-8
FORSCOM

Installation (activity) and location	UIC	EMM (DA Pam 738-750)
Fort Bragg, NC	WOU3AA	A, D, E, F, G, H, J, K, L, N, P, Q, S, T, U, V, W, X, Z
Fort Campbell, KY	WOU4AA	D, E, F, G, H, J, K, N, P, Q, S, T, U, V, W, X, Z
Fort Carson, CO	WOVNAA	A, D, E, F, G, H, J, K, N, P, Q, S, T, U, V, W, X, Z
ESC 1, 96th ARCOM, Salt Lake City, UT	W3E401	D, E, H, J, K, N, P, Q, S, T, U, V, W, X, Z
Fort Devens, MA	WOUGAA	A, D, E, F, G, H, J, K, N, P, Q, S, T, U, V, W, X, Z
Fort Drum, NY	WOXQAA	A, D, E, F, G, H, J, K, N, P, Q, S, T, U, V, W, X, Z
Fort Dix, NJ	W1DCAA	A, D, E, F, G, H, J, K, N, P, Q, S, T, U, V, W, X, Z
Fort Hood, TX	WOVCAA	A, D, E, F, G, H, J, K, N, P, Q, S, T, U, V, W, X, Z
Fort Lewis, WA	W12KAA	A, D, E, F, G, H, J, K, N, P, Q, S, T, U, V, W, X, Z
Fort McCoy, WI	WOXYAA	D, E, F, G, H, J, K, N, P, Q, S, T, U, V, W, X, Z
Selfridge ARNG Base, IL	WOXY30	H, J, K, N, P, Q, S, T, U, V, W, X
Sheridan DS/GS Activity, IL	WOXY22	D, E, F, G, H, J, K, N, P, Q, S, T, U, V, W, X, Z
Fort McPherson, GA	WOUSAA	D, E, H, J, K, L, N, P, Q, S, T, U, V, W, X, Z
Fort Meade, MD	WOUSAA	D, E, F, G, H, J, K, L, N, P, Q, S, T, U, V, W, X, Z
U.S. Army Support Detachment, Oakdale, PA	WOU5AA	D, E, F, G, H, J, K, N, P, Q, S, T, U, V, W, X, Z
Maintenance Division, Philadelphia, PA	WOU5AA	D, E, F, G, H, J, K, N, P, Q, S, T, U, V, W, X, Z
ECS 16, 63D ARCOM, Los Alamitos, CA	W3E102	D, E, F, G, H, J, K, N, P, Q, S, T, U, V, W, X, Z
Fort Hunter Liggett, CA	WOQAA	F, G, H, J, K, N, P, Q, S, T, U, V
Fort Sam Houston, TX	WOVDAA	A, D, E, F, G, H, J, K, N, Q, S, T, U, V, W, X, Z
Fort Ord, CA	WOMYAA	A, D, E, G, H, J, K, L, N, P, Q, S, T, U, V, W, X, Y, Z
Fort Polk, LA	WOVFAA	A, D, F, G, H, J, K, N, P, Q, S, T, U, V, W, X, Z

**Table B-8
FORSCOM—Continued**

Installation (activity) and location	UIC	EMM (DA Pam 738-750)
Fort Riley, KS	WOVMAA	A, D, E, F, G, H, J, K, N, P, Q, S, T, U, V, W, X, Z
Fort Stewart/Hunter, AAF, GA	WOVAAA	A, D, E, F, G, H, J, K, L, N, P, Q, S, T, U, V, W, X, Z
National Training Center and Fort Irwin, CA	W4E6AA	A, D, E, F, G, H, J, K, N, P, Q, S, T, U, V, W, X, Z
AMSA 161, USAR Forces, Puerto Rico	W3EN09	D, E, G, H, J, K, L, N, P, Q, S, T, U, V, W, X, Z
ASF85, 97th ARCOM, Fort Meade, MD	W3EAAA	A

**Table B-9
HSC (See note)**

Installation (activity) and location	UIC	EMM (DA Pam 738-750)
Fitzsimons Army Medical Center, Denver, CO	WOQ2AA	J, K, O, P, Q, S, T, U, V, W, X, Y, Z
U.S. Army Garrison, Fort Detrick, MD	W3HVAA	H, J, K, P, Q, S, T, U, V, W, X
Walter Reed Army Medical Center, Washington, DC	W2DHAA	J, K, O, P, Q, S, T, U, V, W, X

Notes:

HSC medical centers, medical department activities, and selected health clinics, located at an installation that belongs to another MACOM, will provide maintenance support for medical, dental, and optical equipment within their geographical area of responsibility per AR 40-61.

**Table B-10
MDW**

Installation (activity) and location	UIC	EMM (DA Pam 738-750)
Fort Belvoir, VA	W4VNAA	D, E, G, H, J, K, L, N, P, Q, S, T, U, V, W, X, Y, Z
MDW DCSLOG Cameron Station, VA	W3J8AA	V, X
U.S. Army Division Aviation Command, Fort Belvoir, VA	WOY4AA	A, J, K
MDW DCSLOG Troop Support Div Fort Myer, VA	W3J8AA	Z

**Table B-11
MTMC**

Installation (activity) and location	UIC	EMM (DA Pam 738-750)
Military Ocean Terminal, Bayonne, NJ	W1WYAA	L, M, P, Q, S, T, U, V, W, X
Military Ocean Terminal, Southport, NC	W1QAAA	H, L, M, N, P, Q, S, T, U, V, W
Military Ocean Terminal, Bay Area, Oakland Army Base, Oakland, CA	W1M4AA	H, M, N, P, Q
MTMC, Transportation Unit, Azores	M1LPAA	L
MTMC, Terminal Okinawa	W4BVAA	H, P, Q
MTMC, USAG, Oakland Army Base, CA	W2DT01	H, J, M, N, P, Q, U, X
MTMC, Terminal Pusan, KOR	W3H5AA	L

Table B-12
TRADOC

Installation (activity) and location	UIC	EMM (DA Pam 738-750)
Carlisle Barracks, PA	WOUUAA	W, X
Fort Benjamin Harrison, IN	W1EXAA	H, N, P, Q, S, T, U, V, W, X, Y, Z
Fort Benning, GA	WOU2AA	A, B, C, D, E, F, G, H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Fort Bliss, TX	WOVHAA	A, B, C, D, E, F, G, H, J, K, N, P, Q, S, T, U, V, W, X, Z
Fort Eustis, VA	WOUVAA	A, D, E, H, J, K, L, N, P, Q, S, T, U, V, W, X, Y, Z
Fort Gordon, GA	WOU5AA	E, H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Fort Huachuca, AZ	WOZQAA	A, D, E, F, G, H, J, K, N, P, Q, R, S, T, U, V, W, X
Fort Jackson, SC	WOU6AA	D, E, H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Fort Knox, KY	WOUXAA	A, B, C, D, E, F, G, H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Fort Leavenworth, KS	WOVPAA	H, J, K, P, Q, S, T, U, V, W, X, Y, Z
Fort Lee, VA	WOUOAA	E, H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Fort Leonardwood, MO	WOVLAA	D, E, F, G, H, J, K, L, N, P, Q, S, T, U, V, W, X, Y, Z
Fort McClellan, AL	WOU7AA	D, E, F, G, H, J, K, P, Q, S, T, U, V, W, X, Y, Z
Fort Rucker, AL (See note)	WOU9AA	A, B, C, D, E, F, G, H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Fort Sill, OK	WOVGAA	A, B, C, D, E, F, G, H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z

Notes:

Missile mission M22 and M70 aircraft armament subsystem only.

Table B-13
USAREUR/Seventh Army

Installation (activity) and location	UIC	EMM (DA Pam 738-750)
V Corps		
Roedelheim	W32P13	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Giessen	W32P05	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Hanau	W32P04	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Bad Kreuznach	W32V02	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Baumholder	W32Y02	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Darmstadt	W32004	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Frankfurt	W32106	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Fulda	W32203	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Hanau	W32706	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Mainz	W33C02	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Wiesbaden	W36206	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Wildflecken	W1EK13	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
VII Corps		
Augsburg	W320U1	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Neurnberg	W32304	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Stuttgart	W32L02	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Wuerzburg	W32N01	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Ansbach	W32S01	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Aschaffenburg	W32T01	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z

Table B-13
USAREUR/Seventh Army—Continued

Installation (activity) and location	UIC	EMM (DA Pam 738-750)
Bad Toelz	W32W01	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Bamberg	W32X01	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Garmisch	W32401	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Goeppingen	W32601	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Heilbronn	W32901	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Munich	W33E01	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Neu Ulm	W33F01	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Schwaebisch Hall	W33H01	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Schweinfurt	W33J01	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
7th Training Command		
Grafenwoehr	W1EK15	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Vilseck	W1EK7A	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Bayreuth	W1EK16	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Hohenfels	W1EK12	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
21st Support Command		
Bremerhaven	W32Z05	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Burtonwood Reserve Storage Activity	W4HRAA	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Chievres (NSSG)	W0UK01	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Kaiserslautern	W32R04	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Mannheim	W32R03	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Germersheim	W0CF01	E, H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Kaiserslautern	W33A01	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Karlsruhe	W33B01	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Miesau (60th Ordinance)	W0CBAA	B, H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Pirmasens	W33G01	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Schinnen (SHAPE)	WCA099	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Worms	W33M01	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Zweibrucken	W33P01	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
U.S. Army Southern European Task Force		
Leghorn	WCSM7A	B, H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Vicenza	W4CT13	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
26th Support Command		
Heidelberg	W32801	H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
U.S. Army Berlin	W1Y47A	D, E, F, G, H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z

Table B-14
USARPAC

Installation (activity) and location	UIC	EMM (DA Pam 738-750)
DOM, 17th Area Support Group	WDCA99	H, J, L, M, N, P, Q, S, T, U, V, W, X, Y, Z
78th Aviation Bn	W3NDAA	A
35th Supply and Services Bn	WCA699	E, O
83d Ordnance Bn	WB0399	R
DOM, 10th Area Support Group	WERG99	H, L, N, P, Q, S, T, U, V, W, X, Z
U.S. Army Support Command, Hawaii, Fort Shafter, HI	W3RBAA	D, E, F, H, J, K, L, N, P, Q, S, T, U, V, W, X, Y, Z
Fort Richardson, AK	WOVKAA	D, E, F, G, H, J, K, N, P, Q, S, T, U, V, W, X, Y, Z
Fort Wainwright, AK	WOVKAA	D, E, F, G, H, J, K, N, P, Q, S, T, U, V, W, X, Z

Table B-15
USARSO

Installation (activity) and location	UIC	EMM (DA Pam 738-750)
DOL, 41st Area Support Group, (ASG) Corozal, PM	WJB899	D, E, G, H, J, K, N, P, Q, S, T, U, V, W, X
DOL, 41st ASG, Dock 45, Fort Davis, PM	WJB899	L
DOL, 41st ASG, Fort Davis, PM	WJB899	V

Table B-16
Equipment Maintenance Mission Codes

Code	Description	Code	Description	Code	Description
A	Aircraft	K	Electronic test equipment	T	Machine tools
B	Air defense systems	L	Floating Equipment	U	Shop support equipment
C	Missile systems surface-to-surface	M	Railway equipment	V	Non-tactical vehicles
D	Artillery weapons	N	Construction equipment	W	Furniture and appliances
E	Small arms	O	Medical and dental equipment	X	Office equipment
F	Tanks	P	Materiel handling equipment	Y	Tools not elsewhere
G	Combat Vehicles	Q	Support equipment		classified
H	Tactical vehicles	R	Ammunition and ammunition equipment	Z	Equipment not listed elsewhere
J	Communication and Electronic equipment	S	Installation and depot-peculiar service equipment		

Appendix C

Maintenance Performance Measures

C-1. General

The performance measures discussed in the paragraphs below were developed to assist the unit commander and maintenance shop officer in evaluating critical maintenance operations and in determining overall performance. In accordance with paragraph 4-13, the computation and reporting of utilization rates is mandatory if the information system to collect data, perform trend analyses, and provide the performance reports is automated, and optional if manual. All other performance measures are optional. The optional performance measures will not be used for inspection purposes.

C-2. Utilization rate

a. There are two utilization rates that are used to measure the effective use of mechanics. The assigned utilization rate measures the percent of direct labor man-hours assigned to the unit recorded as productive man-hours on DA Forms 2407 and 5504. The available utilization rate measures the percent of direct labor man-hours made available to the shop office for work recorded as productive man-hours on DA Forms 2407 and 5504.

b. Direct labor is work performed by assigned personnel that directly contributes to the repair of equipment.

c. Indirect labor is work performed by assigned personnel that contributes to the completion of work orders but does not include the performance of repairs.

d. Productive time is the sum of direct and indirect labor time.

e. Assigned direct labor personnel includes all civilians and soldiers whose primary duties require they spend more than 50 percent of their time performing repairs.

f. Assigned indirect labor personnel are civilians and soldiers whose primary duties require they spend 50 percent or less of their time performing repairs.

g. Assigned direct and indirect labor man-hours is computed as the number of assigned direct labor personnel times 8 hours per work day times the number of work days in the reporting period.

h. Available direct and indirect labor man-hours are the assigned direct and indirect labor man-hours less those non-productive man-hours in the following categories:

(1) Military training (non maintenance skill training).

(2) Alert duty.

(3) Organizational duties.

(4) Flight status.

(5) Personnel processing.

(6) TDY.

(7) Compensatory time off.

(8) Excused from duty.

(9) Ordinary leave.

(10) Sick leave (civilian).

(11) Medical absence (military).

(12) Personal affairs.

(13) AWOL/confined.

(14) Leave without pay.

(15) Job related injury.

(16) Administrative leave.

i. Overtime is that time worked beyond the normal 8 hour day. Overtime will be added to the assigned and available labor man-hours to ensure the total productive man-hours are accounted for in the utilization rate.

j. Table C-1 is an example of how to compute man-hour utilization manually.

k. Table C-2 is an example of a report format that shows separate percentages for direct, indirect, and non-productive man-hours.

l. An assigned man-hour utilization rate formula is shown below:

$$\text{Assigned man-hour utilization rate} = \frac{\text{Actual Productive Man-hours}}{\text{Assigned DL Personnel Man-hours}} \times 100$$

m. An available man-hour utilization rate formula is shown below:

$$\text{Available man-hour utilization rate} = \frac{\text{Actual Productive Man-Hours}}{\text{DL Personnel Man-hours}} \times 100 \text{ Available}$$

C-3. Materiel readiness rate

DS and GS maintenance organizations may measure the ultimate successful accomplishment of their mission against the materiel readiness of the equipment they support. As a measure of maintenance performance, however, the materiel readiness rate gives only an indication of the possible presence or absence of problem situations. The indication must be followed up to reach a logical conclusion.

C-4. Workload

Workload is the sum of the estimated man-hours required for work awaiting induction and to complete work in progress. Established time standards for tasks performed on a repetitive basis will result in more accurate man-hour

estimates. The task time standards should be reviewed and adjusted at least semiannually. An increasing trend in workload might indicate—

- a. Additional quantities added to the density list.
- b. Newer equipment requiring greater annual maintenance man-hours.
- c. Acceptance of work orders that include tasks authorized for performance at lower or higher levels of maintenance.
- d. Increased work order requests due to increased supported unit training.

C-5. Direct labor availability

Direct labor availability is the number of man-hours available per day to perform maintenance tasks, such as, the productive capacity of the organization. If a review of projected personnel gains and losses 90 days to 180 days out indicates an adverse situation is developing, the following alternatives should be addressed:

- a. Expediting the personnel replacement process.
- b. Borrowing personnel from other organizations.
- c. Using local contract or host nation support.
- d. Shifting a portion of the workload to another organization that has excess productive capacity.

C-6. Efficiency rate

a. The efficiency rate is a measure of the skill proficiency within the maintenance organization. It is totally dependent upon establishment and maintenance of a set of task time standards that are representative of maintenance performance under the local situation. Inspectors will use the task time standards to estimate the man-hours required to complete each work order.

b. The efficiency rate is the man-hours estimated for a given work order (or the total of estimated man-hours for all work orders completed during a given period of time) divided by the man-hours that were actually expended to accomplish the work orders.

c. The recommended management objective for the efficiency rate is 80 to 100 percent.

d. The efficiency rate will be calculated for the unit by including all of the work orders completed during the reporting period. It will be calculated for specific individuals on an "as required" basis to measure skill proficiency and thus identify training requirements.

e. The trend of the efficiency rate should be plotted for the previous 12 months. When a declining trend is observed, the following should be considered:

- (1) Review the maintenance task standards for validity.
- (2) Verify the effectiveness of supervision within the shops.
- (3) Review the supported density list to identify new equipment for which MOS training may be required.
- (4) Identify individuals who require additional training in certain skills or on certain equipment.
- (5) Physical layout.
- (6) Tool and TMDE availability.
- (7) Amount of lag time spent waiting for tools and parts.

C-7. Backlog

a. Backlog is the overall measure of the direct labor resources required in terms of the number of days that would be required to accomplish the existing workload with available direct labor and with current utilization and efficiency rates and without regard to repair parts availability. The formula for backlog computation is as follows:

$$\text{Backlog (in work days)} = \frac{W}{A \times U \times E}$$

Where:

W=workload

A=direct labor availability

U=direct labor utilization rate

E=efficiency rate

b. The standard for backlog should be established at the local level based on the equipment supported and historical experience. The previous 12 months experience should be analyzed for trends. If an unfavorable trend emerges, the components of the backlog formula should be analyzed to identify the probable cause.

C-8. Turnaround time

a. Turnaround time is the overall measure of the duration of the maintenance cycle. It gives an indication of the responsiveness of the maintenance organization to its customers. Turnaround time should be computed by commodity

and exclude initial rejects. It covers the period of time from acceptance of a work order to closeout. It does not include time awaiting customer pickup.

b. Turnaround time will be determined as follows:

(1) Identify the number of calendar days between acceptance and closeout for each work order completed during the period.

(2) Arrange the work orders in ascending order based upon the number of calendar days.

(3) Remove from consideration the 25 percent of the total number of work orders with the highest number of calendar days.

(4) Calculate the average of calendar days for the remaining work orders.

c. The 25 percent of work orders with long times should be the subject of intensive individual attention to resolve their particular problems, but should not be allowed to distort the average of turnaround time that is intended to be representative of normal operations.

d. Turnaround time involves the following three major components: maintenance delay time, supply delay time, and repair cycle time. Although the factors that comprise or influence these components are not always controllable, no corrective actions can be taken until the problems have been identified and traced to the probable cause. Maintenance shop officers are responsible for correcting those factors which they can control and for bringing to the attention of the chain of command those factors beyond their control.

e. Commanders at the local installation level should establish a standard for the turnaround time measure. The trend of the turnaround time and its major components should be plotted for the previous 12 months. When an increasing trend is observed, the major components of turnaround time should be reviewed and analyzed as indicated in the following paragraphs.

C-9. Maintenance delay time

a. Maintenance delay time is the component of turnaround time that represents time spent awaiting a required resource other than repair parts; that is the availability of facility space, tools, TMDE, and skilled personnel. It includes time awaiting initial, in-process, and final inspections, and time awaiting induction into the shop.

b. Maintenance delay time is calculated using the same segment of work orders completed during the period as used to calculate turnaround time. It is determined by calculating the mean number of calendar days that work orders in the segment were carried in status codes indicating awaiting inspection, awaiting shop, or awaiting some action other than receipt of repair parts. It will also be expressed as a percentage of the total turnaround time.

c. Local commanders should establish a standard for maintenance delay time in terms of its percentage of total turnaround time. When an increasing trend is observed, the following should be reviewed:

(1) Availability and utilization of direct labor personnel.

(2) Inspection procedures.

(3) The ratio of direct labor personnel to work stations by shop section; balance labor among work stations.

(4) The adequacy of the quantity of tools and TMDE.

(5) The adequacy of lift and materiel handling equipment.

C-10. Supply delay time

a. Supply delay time is the component of turnaround time that represents time lost waiting for receipt of repair parts. It includes only that time when no further maintenance action can be taken due to a lack of repair parts. Time elapsed while repair parts are on order but other maintenance actions are, or could be, taken will not be counted as supply delay time.

b. Supply delay time is calculated using the turnaround time segment of work orders completed during the period. It is determined by calculating the average number of calendar days that work orders in the segment were carried in status codes indicating no further action possible while awaiting receipt of repair parts. It is also expressed as a percentage of the total turnaround time.

c. The standard for supply delay time should be established by the local commander in terms of its percentage of total turnaround time.

d. When an increasing trend is observed, the following should be reviewed:

(1) Requisition priorities.

(2) Reconciliation procedures.

(3) Authorized stockage list.

(4) Supply performance measures, including—

(a) Gross availability or fill rate.

(b) Average customer wait time.

(5) Requisition processing time.

(6) Receipt processing time.

C-11. Repair cycle time

a. Repair cycle time is the component of turnaround time that represents time spent in the shop undergoing inspection, repair, or service. It is the primary component that measures actual maintenance performance rather than detractors to performance as measured by the two delay time components. Repair cycle time is comprised of, or influenced by, several factors that are addressed separately below.

b. Because it is the only delay component that is subject to distortion by a small percentage of the total, the repair cycle time will be calculated using all of the work orders completed during the period. It will be determined by calculating the average number of calendar days that work orders were carried in status codes indicating "in shop."

c. Installation level commanders should establish standards for total repair cycle time, by priority of the work order. When an increasing trend is observed, the factors affecting repair cycle time should be reviewed and analyzed as indicated below.

C-12. Backup support utilization

a. Backup support utilization is a measure of the extent of workload transferred to an organization charged with the responsibility of absorbing overflow workload.

b. Backup support utilization is a percentage calculated by dividing the number of man-hours estimated for all work orders accepted into the maintenance activity during the period into the number of man-hours estimated for work orders evacuated to backup support during the same period.

c. The standard for backup support utilization should be established by the installation commander. The installation commander should consider the unit's capacity as stated in its MTOE. When an increasing trend is observed, the following items should be reviewed:

- (1) The trend of workload acceptance to identify an increase in work coming in from supported units.
- (2) The supported density lists to identify additional quantities supported.
- (3) Direct labor availability to identify a decrease in labor capacity.
- (4) Direct labor utilization rate to identify a decrease in effective use of personnel resources.

C-13. Maintenance float utilization

a. *Transaction time.*

(1) Maintenance float transaction time measures a factor that impacts upon repair cycle time and the efficiency of the maintenance float decision process.

(2) Maintenance float transaction time is determined by calculating for the previous 12 months an average of the number of calendar days between the acceptance of the work order into the support maintenance activity and the customer receipt of the float.

(3) The standard for maintenance float transaction time should be established by the local installation commander. When an increasing trend is observed, the following items should be reviewed:

- (a) The float decision process to ensure that the decision to float is made as early as possible.
- (b) The availability of float assets to identify underutilized items or shortages.
- (c) The demand recording process to ensure that demands are being captured.
- (d) The priority placed on work orders to repair float assets to ensure that it matches the highest priority of supported units authorized these items.

b. *Float utilization.*

(1) Float utilization is computed as the number of work orders closed out using float divided by the total number of work orders less initial rejections.

(2) If you are not using the float, this factor will be low and should trigger management action to evaluate if equipment maintained as float should be retained.

C-14. Rejection rate

a. The rejection rate is the number of items being reinducted into the shop for rework. This includes in-shop and final inspection rejections and customer rejections and returns for correction of the same problem within 30 days after closeout of the work order.

b. The rejection rate standard should be established by the local commander.

c. If the in-shop rejection rate exceeds the standard, the shop officer should—

- (1) Validate the inspection.
- (2) Determine adequacy of leadership and supervision within the shops.
- (3) Determine if procedures are correct. If not, submit recommended changes to TMs.
- (4) Determine if new equipment or basic skills training is required.
- (5) Determine if facilities are adequate.

d. If the customer rejection or return rate exceeds the standard, the shop officer should—

- (1) Validate the inspection standards and skills.
- (2) Determine if additional new equipment or basic skills training is required.
- (3) Determine if repeated faults are a result of improper operation or unit maintenance.

- (4) Determine if customer relations are the cause of the increased rejection rate.

Table C-1
Unit commander's computation of utilization rate using assigned personnel

	Assigned	M/H Assigned	Overtime	Total Assigned
Day	Personnel	Normal 8 Hour Day	Hours	Man Hours
1	10	80	0	80
2	9	72	0	72
3	11	88	0	88
4	11	88	0	88
5	12	96	48	146
6	12	96	48	146
7	13	104	26	130
8	10	80	0	80
9	10	80	0	80
10	12	96	0	96
Total Direct Labor Man-Hours Assigned				1002

Notes:

¹ Computation of Total Direct Labor Man-hours Assigned.

² Total direct and indirect labor man-hours reported for the 10 day report period on DA Forms 2407 and 5504 is 340.

³ Using the formula in paragraph C-2 the utilization rate is computed as:

Utilization Rate = $340 \div 1002 \times 100 = 34\%$

Table C-2
Assigned and Available Man-hour utilization report sample Unit: B Btry, 2/60

1 Assigned Man-Hours	Direct Man-hours	%	Indirect Man-hours	%	Non-Productive Man-hours	%
40	20	50	10	25	10	25%

Notes:

¹ Assigned man-hours—Enter the number of man-hours assigned for productive direct labor during a specified time period, based on a locally established work schedule day multiplied by the number of direct labor personnel assigned.

² Available man-hours—Enter the number of man-hours available for productive direct labor during the reporting period. The available man-hours represent the time the direct labor personnel spend in the maintenance facility available to perform maintenance.

³ Direct man-hours—Enter the number of man-hours actually expended during the specified time period for hands-on maintenance tasks.

⁴ Percentage—Divide direct man-hours by assigned man-hours and enter the result.

⁵ Indirect man-hours—Enter the number of man-hours actually expended during the specified time period providing productive support for the accomplishment of direct labor.

⁶ Percentage—Divide indirect man-hours by assigned man-hours and enter the result.

⁷ Nonproductive man-hours—Enter the number of man-hours actually expended during the specified time period which did not provide support for the accomplishment of direct labor.

⁸ Percentage—Divide nonproductive man-hours by assigned man-hours and enter the result.

⁹ 1 Available man-hour utilization can be reported using the same format by substituting available man-hours where assigned man-hours appears.

Appendix D

Instructions for Preparing the Unit Maintenance Profile (UMP), Army Award for Maintenance Excellence

D-1. General

a. The UMP will be prepared in the format prescribed in this Appendix, and submitted in a three-ring binder not to exceed one inch in thickness. Binder covers will be labeled with the category of competition, unit designation, location,

MACOM, MTOE/TDA number, Force Activity Designator (FAD), complete mailing address (include building number), zip code or Army Post Office, message address, and DSN and/or commercial phone numbers.

b. All evaluation areas must be addressed, either in a narrative or supporting table/figure format. Items not applicable to the unit should be identified and a brief explanation provided.

c. UMP submissions should be unclassified. Essential classified information (up to SECRET) may be submitted; however, it must be marked and submitted separately by forwarding in accordance with physical security guidelines. If a classified packet is submitted, the nominating organization/command must notify the USAOC&S, ATSL-AAME, by phone or fax not less than three days before mailing the packet. Any portion of the unit's name, mission, location, or packet that is not releasable for publicity should be specified to USAOC&S, ATSL-AAME.

d. UMP submissions are to be forwarded by registered mail to the Commander, U.S. Army Ordnance Center and School (USAOC&S), ATTN: ATSL-AAME, Aberdeen Proving Ground, MD 21005-5201. Nominations must arrive NLT 15 December following the fiscal year of competition.

D-2. Table of Contents

List all parts and tabs of the UMP in the table of contents.

(Sample format at Figure D-1.)

D-3. Part I Administrative

a. *Tab A-Mission Statement.* Explain what the unit does in quantifiable terms, including the size of the area of operations, miles traveled in support of the mission, the number of personnel involved, and numbers and type of equipment maintained (e.g., vehicles, aircraft, weapons, communications-electronics, medical, nuclear, biological, chemical, and mess).

b. *Tab B-Endorsements.* Provide endorsements by the chain of command, including the MACOM commander.

c. *Tab C-Unit Points of Contact.* Provide the name, rank, position, unit address, and DSN/commercial telephone numbers of the primary and alternate unit POCs.

d. *Tab D-MTOE/TDA and Personnel/Equipment Fill Data.*

(1) Provide a recapitulation of required and authorized personnel and equipment. If applicable, also include equipment summaries from documents (e.g., support agreements) that list other equipment on which unit-level maintenance is performed.

(2) Personnel fill. List personnel authorized strength and percent of fill; monthly for active units and quarterly for reserve units. Indicate percent of fill for each military and civilian occupational specialty. (Sample format at Figure D-2.)

(3) Equipment overages and shortages. List end of year percent of fill for all authorized equipment. (Sample format at Figure D-3.)

D-4. Part II Areas of Evaluation

Part II consists of four areas of evaluation: Readiness; Maintenance Management; Maintenance Training; and Leadership and Innovation. Narratives and data cover one year of data accumulated during the fiscal year of competition. The narrative for each area should not exceed two typewritten pages. Supporting documentation (if required) may be provided in enclosures which will not count against the narrative page limit. Sample formats are provided for assistance, but alternate formats are acceptable.

a. *Tab A-Readiness* (TAQ Categories: Business Results and Customer Satisfaction). This evaluation area focuses on the organization's overall mission performance, its ability to meet command expectations and mission requirements, and its success in improving operations.

(1) Briefly describe the unit readiness posture in terms of monthly (Active Component) or quarterly (Reserve Component) operational availability rates of equipment maintained. Do not submit actual readiness reports; summaries are sufficient. (Sample format at Figure D-4).

(2) Briefly describe the results of command inspections and evaluations, e.g., local maintenance evaluation team (MET), roll-out exercises, alerts, roadside spot checks, annual training evaluations, and similar exercises.

(3) Describe significant accomplishments or problem resolution in this area which have improved unit readiness or customer satisfaction.

b. *Tab B-Maintenance Management.* (TAQ category: Process Management). This evaluation area focuses on the key processes and components necessary for an effective maintenance program, and how they are monitored, managed, and improved to support maintenance excellence. Include the following:

(1) Index of Standing Operating Procedure.

(2) Management of Class II, III, VIII and IX Supplies. Explain how the unit manages these classes of supply in support of the unit maintenance program to include: number of authorized PLL lines, percent of PLL zero balances by month, percent of high priority requests submitted by month, percent of requisitions rejected by month, control and turn-in of excess parts, and repair and return of repairable. (Sample format at Figure D-5.)

(3) Tool Control. Explain unit accountability, inventory, maintenance and security of tools.

- (4) Management of Test, Measurement, and Diagnostic Equipment (IMDE). Explain unit accountability, calibration and security of TMDE. List delinquency rates, and monitoring procedures.
- (5) Management of Army Oil Analysis Program (AOAP). Explain the unit program to include: delinquent sample rate, equipment enrolled, personnel involved, etc.
- (6) Availability and use of publications. Explain unit management to ensure current publications and enforce usage.
- (7) Quality assurance/quality control program. Describe the unit program to ensure quality repairs performed to standard.
- (8) Hazardous waste management. List compliance with environmental laws and hazardous waste materials management procedures.
- (9) Significant accomplishments and problem resolutions in maintenance management.

c. Tab C—Maintenance Training. TAQ category: Human Resource Development and Management. This evaluation area describes how the unit evaluates maintenance skills and training needs; the programs used to provide and improve these skills; award and incentive programs to recognize excellence; and unit safety programs. Briefly describe the unit's involvement in each of the following programs. Include one monthly training schedule and discuss how maintenance related deficiencies/weaknesses were incorporated as part of the unit's training program.

- (1) Drivers Training. Describe the program and its effectiveness.
- (2) Cross-Training. Discuss purpose and effectiveness of the training.
- (3) Field Training Exercises, (e.g. ARTEP, ExEval FTX, STX, CPX, etc.) Discuss purpose, scope, effectiveness, and maintenance strengths/weaknesses identified during the training.
- (4) Professional development training to enhance maintenance excellence. Discuss correspondence courses, installation, college, Regional Training Sites—Maintenance, and service school course participation.
- (5) Maintenance-related award and incentive programs.
- (6) Significant accomplishments or problem resolution in this area.

d. Tab D—Leadership and Innovation. TAQ category—Leadership. This evaluation area focuses on the personal leadership and involvement of the commander and the chain of command in communicating maintenance standards and expectations, fostering stewardship of maintenance resources, and encouraging excellence at all levels of the organization.

- (1) Describe unit policies and procedures that focus command and leadership emphasis on unit level maintenance and quality of the total maintenance effort.
- (2) Explain innovative ways the unit has executed Army policy and regulatory requirements, to include cost savings/avoidance.

D-5. Part III—Additional Information

a. Tab A—Nominee information. Include the name, grade, and SSN of the unit commander, first sergeant, maintenance officer/NCO, and those civilian personnel most directly associated with the unit or activity maintenance achievement. Information should be releasable for hometown news releases and publicity media. Use DD Form 2266, (Information for Hometown News Release).

b. Tab B—Pictures, articles and general information items. These items are optional and should support the UMP, but will not be evaluated. Films, video tapes, and storage diskettes will not be accepted.

UMP Table of Contents
(Prepared by the submitting unit)

Part I. Administrative

Tab A. Mission Statement

Tab B. Command/MACOM Endorsements

Tab C. Unit Points of Contact

Tab D. MTOE/TDA and Personnel/Equipment Fill Data

Part II. Areas of Evaluation

Tab A. Readiness

(1) Narrative (maximum of 2 pages)

(2) Enclosures (supporting documentation)

Tab B. Maintenance Management

(1) Narrative (maximum of 2 pages)

(2) Enclosures (supporting documentation)

Tab C. Maintenance Training

(1) Narrative (maximum of 2 pages)

(2) Enclosures (supporting of documentation)

Tab D. Leadership and Innovation

(1) Narrative (maximum of 2 pages)

(2) Enclosures (supporting documentation)

Part III. Additional Information

Tab A. Nominee Information

Tab B. Pictures, Articles, etc.

Figure D-1. Sample Table of Contents for UMP Packet

-
1. List specific MOS/Job Series/Specialty Code.
 2. Show number of authorized personnel for each of the above.
 3. Show number of on hand personnel for each of the above (based on 12 month average).
 4. Show the percentage of fill (based on 12 month average).

Bullet Comments:

o Use bullet comments to explain any of the above items, provide additional information, and provide specific comments as to unit personnel readiness.

Figure D-2. Authorized Personnel Fill

-
1. List nomenclature for authorized equipment.
 2. Show number authorized, number on hand, any overages or shortages, and the percent of fill for each listed item (end of year snapshot).

Bullet Comments:

o Use bullet comments to explain any of the above information or to provide additional information.

Figure D-3. Authorized Equipment Overages and Shortages

Show operational readiness rate for each month of the FY.

Bullet Comments:

o Use bullet comments to provide any additional information to explain the equipment readiness rates.

Figure D-4. Equipment Readiness Rates

-
1. Number of prescribed load list (PLL) lines authorized during each month of the FY.
 2. Percentage of the authorized PLL lines at zero balance (average for each month).
 3. Percentage of requisitions which were high priority (number of high priority requisitions divided by the total number of requisitions) for each month.
 4. Percentage of requisitions which were rejected (number of requisitions rejected divided by the total number of requisitions) for each month.

BULLET COMMENTS:

o Use bullet comments to explain any of the above items, provide additional information, indicate how the unit controlled and managed any excess parts, and describe the repair and return of reparable in support of the maintenance program.

Figure D-5. Management of Class II, III, VII & IX Supplies

Appendix E MANAGEMENT CONTROL EVALUATION CHECKLIST

E-1. FUNCTION: ARMY OIL ANALYSIS PROGRAM (AOAP)

E-2. PURPOSE:

To assist the Division ADC-S/MACOM G-4 in evaluating the key management controls. It is not intended to cover all controls.

E-3. INSTRUCTIONS:

Answers must be based on the actual testing of controls (e.g. document analysis, direct observation, interviewing, sampling, simulation, other). Answers which indicate control problems must be explained (and corrective action indicated) in supporting documentation. These controls must be evaluated in accordance with the schedule in the Management Control Plan.

E-4. TEST QUESTIONS:

(Reference AR 750-1, 1 Aug 94, Paragraph 4-36, Army Oil Analysis Program).

- a. Have AOAP monitors at each level of command been assigned and properly trained by the supporting laboratory or installation AOAP monitor?
- b. Are AOAP laboratories' operations adequately funded?
- c. Are commanders actively participating in the AOAP?
- d. Is feedback being sent to laboratories by users?
- e. Are supported units properly responding to laboratory recommendations?

ASSESSABLE UNIT MANAGER: (Sign and Date)

E-5. COMMENTS:

Help make this a better review tool. Submit comments to the HQDA functional proponent: DALO-SMM, DEPUTY

CHIEF OF STAFF FOR LOGISTICS, 500 ARMY PENTAGON, WASHINGTON, DC 20310-0500 (Provide information copy to Commander, USALEA, ATTN: LOIA-M, New Cumberland, PA 17070-5007)

E-6.

This checklist supersedes the checklist for AR N/A, task N/A, previously published in DA Circular N/A. For assistance in responding to questions, contact the functional proponent.

**Appendix F
MANAGEMENT CONTROL EVALUATION CHECKLIST**

F-1. FUNCTION: ARMY OIL ANALYSIS PROGRAM (AOAP)

F-2. PURPOSE:

To assist the AMC DCSLOG in evaluating the key management controls. It is not intended to cover all controls.

F-3. INSTRUCTIONS:

Answers must be based on the actual testing of controls (e.g. document analysis, direct observation, interviewing, sampling, simulation, other). Answers which indicate control problems must be explained (and corrective action indicated) in supporting documentation. These controls must be evaluated in accordance with the schedule in the Management Control Plan.

F-4. TEST QUESTIONS:

(Reference AR 750-1, 1 Aug 94), Paragraph 4-36, Army Oil Analysis Program).

- a. Is required laboratory equipment being funded and procured?
- b. Are laboratory equipment and personnel properly certified?
- c. Are weapon systems being included in and configured for the AOAP when required?
- d. Are satisfactory plans in place to provide AOAP support to a theater of operations in a contingency?

ASSESSABLE UNIT MANAGER: (Sign and Date)

F-5. COMMENTS:

Help make this a better review tool. Submit comments to the HQDA functional proponent: DALO-SMM, DEPUTY CHIEF OF STAFF FOR LOGISTICS, 500 ARMY PENTAGON, WASHINGTON, DC 20310-0500 (Provide information copy to Commander, USALEA, ATTN: LOIA-M, New Cumberland, PA 17070-5007)

F-6.

This checklist supersedes the checklist for AR N/A, task N/A, previously published in DA Circular N/A. For assistance in responding to questions, contact the functional proponent.

**Appendix G
MANAGEMENT CONTROL EVALUATION CHECKLIST**

G-1. FUNCTION: EQUIPMENT MAINTENANCE

G-2. PURPOSE:

To assist the Division ADC-S/MACOM G-4 in evaluating the key management controls. It is not intended to cover all controls.

G-3. INSTRUCTIONS:

Answers must be based on the actual testing of controls (e.g. document analysis, direct observation, interviewing, sampling, simulation, other). Answers which indicate control problems must be explained (and corrective action indicated) in supporting documentation. These controls must be evaluated in accordance with the schedule in the Management Control Plan.

G-4. TEST QUESTIONS:

(Reference AR 750-1, 1 Aug 94).

- a. Is the importance of maintenance being emphasized at all levels?

- b. Are subordinates held accountable for proper maintenance operations?
- c. Is equipment being maintained to the Army maintenance standard?

ASSESSABLE UNIT MANAGER: (Sign and Date)

G-5. COMMENTS:

Help make this a better review tool. Submit comments to the HQDA functional proponent: DALO-SMM, DEPUTY CHIEF OF STAFF FOR LOGISTICS, 500 ARMY PENTAGON, WASHINGTON, DC 20310-0500 (Provide information copy to Commander, USALEA, ATTN: LOIA-M, New Cumberland, PA 17070-5007)

G-6.

This checklist supersedes the checklist for AR 750-1, task ALL, previously published in DA Circular 11-87-2. For assistance in responding to questions, contact the functional proponent.

Appendix H **MANAGEMENT CONTROL EVALUATION CHECKLIST**

H-1. FUNCTION: MAINTENANCE EXPENDITURE LIMITS (MEL)

H-2. PURPOSE:

To assist the Division ADC-S/MACOM G-4 in evaluating the key management controls. It is not intended to cover all controls.

H-3. INSTRUCTIONS:

Answers must be based on the actual testing of controls (e.g. document analysis, direct observation, interviewing, sampling, simulation, other). Answers which indicate control problems must be explained (and corrective action indicated) in supporting documentation. These controls must be evaluated in accordance with the schedule in the Management Control Plan.

H-4. TEST QUESTIONS:

(Reference AR 750-1, 1 Aug 94, Paragraph 4-5, Maintenance Expenditure Limits [MEL]).

- a. Are Maintenance Expenditure Limits used to ensure economic and operational effectiveness at all maintenance levels?
- b. Are conditions for waivers of published Maintenance Expenditure Limits being met?
- c. Are Maintenance Expenditure Limits established and published for commercial equipment?

ASSESSABLE UNIT MANAGER: (Sign and Date)

H-5. COMMENTS:

Help make this a better review tool. Submit comments to the HQDA functional proponent: DALO-SMM, DEPUTY CHIEF OF STAFF FOR LOGISTICS, 500 ARMY PENTAGON, WASHINGTON, DC 20310-0500 (Provide information copy to Commander, USALEA, ATTN: LOIA-M, New Cumberland, PA 17070-5007)

H-6.

This checklist supersedes the checklist for AR 750-1, task all, previously published in DA Circular 11-93-1. For assistance in responding to questions, contact the functional proponent.

Appendix I **MANAGEMENT CONTROL EVALUATION CHECKLIST**

I-1. FUNCTION: OPERATIONAL READINESS FLOAT (ORF)

I-2. PURPOSE:

To assist the Division ADC-S/MACOM G-4 in evaluating the key management controls. It is not intended to cover all controls.

I-3. INSTRUCTIONS:

Answers must be based on the actual testing of controls (e.g. document analysis, direct observation, interviewing, sampling, simulation, other). Answers which indicate control problems must be explained (and corrective action indicated) in supporting documentation. These controls must be evaluated in accordance with the schedule in the Management Control Plan.

I-4. TEST QUESTIONS:

(Reference AR 750-1, 1 Aug 94, Paragraph 4-39, Maintenance Float).

- a. Has a float coordinator been appointed in writing?
- b. Are ORF assets being maintained IAW appropriate TMs, LOs, etc.?
- c. Are ORF assets being used exclusively for their intended purpose?
- d. Is ORF accountability being properly maintained?
- e. Are excess float assets being disposed of IAW appropriate guidance and regulations?
- f. Is float demand information accurate and submitted in a timely manner?

ASSESSABLE UNIT MANAGER: (Sign and Date)

I-5. COMMENTS:

Help make this a better review tool. Submit comments to the HQDA functional proponent: DALO-SMM, DEPUTY CHIEF OF STAFF FOR LOGISTICS, 500 ARMY PENTAGON, WASHINGTON, DC 20310-0500 (Provide information copy to Commander, USALEA, ATTN: LOIA-M, New Cumberland, PA 17070-5007)

I-6.

This checklist supersedes the checklist for AR N/A, task N/A, previously published in DA Circular N/A. For assistance in responding to questions, contact the functional proponent.

Appendix J MANAGEMENT CONTROL EVALUATION CHECKLIST

J-1. FUNCTION: OPERATIONAL READINESS FLOAT (ORF)

J-2. PURPOSE:

To assist the HQDA Materiel Developer and AMC DCSLOG in evaluating the key management controls. It is not intended to cover all controls.

J-3. INSTRUCTIONS:

Answers must be based on the actual testing of controls (e.g. document analysis, direct observation, interviewing, sampling, simulation, other). Answers which indicate control problems must be explained (and corrective action indicated) in supporting documentation. These controls must be evaluated in accordance with the schedule in the Management Control Plan.

J-4. TEST QUESTIONS:

(Reference AR 750-1, 1 Aug 94, Paragraph 4-39, Maintenance Float).

- a. Are initial ORF requirements being properly developed, coordinated, documented, and funded during the fielding process?
- b. Are ORF authorizations being properly computed, validated, and updated?

ASSESSABLE UNIT MANAGER: (Sign and Date)

J-5. COMMENTS:

Help make this a better review tool. Submit comments to the HQDA functional proponent: DALO-SMM, DEPUTY CHIEF OF STAFF FOR LOGISTICS, 500 ARMY PENTAGON, WASHINGTON, DC 20310-0500 (Provide information copy to Commander, USALEA, ATTN: LOIA-M, New Cumberland, PA 17070-5007)

J-6.

This checklist supersedes the checklist for AR N/A, task N/A, previously published in DA Circular N/A. For assistance in responding to questions, contact the functional proponent.

Appendix K MANAGEMENT CONTROL EVALUATION CHECKLIST

K-1. FUNCTION: SPECIALIZED REPAIR ACTIVITIES

K-2. PURPOSE:

To assist AMC DCSLOG in evaluating the key management controls. It is not intended to cover all controls.

K-3. INSTRUCTIONS:

Answers must be based on the actual testing of controls (e.g. document analysis, direct observation, interviewing, sampling, simulation, other). Answers which indicate control problems must be explained (and corrective action indicated) in supporting documentation. These controls must be evaluated in accordance with the schedule in the Management Control Plan.

K-4. TEST QUESTIONS:

(Reference HQDA message, DALO-SMM, 051750Z Nov 93, subject: Changes to Specialized Repair Activity (SRA) Procedures)

- a. Has a primary point of contact for SRAs been assigned?
- b. Has a standard, automated system for evaluation of SRA requests been provided to the MSCs and DESCOM?
- c. Is the required data base being maintained with current status?
- d. Are monthly reports being provided in a timely manner?
- e. Are SRA requests acted upon (approvals and disapprovals) in a timely manner?

ASSESSABLE UNIT MANAGER: (Sign and Date)

K-5. COMMENTS:

Help make this a better review tool. Submit comments to the HQDA functional proponent: DALO-SMM, DEPUTY CHIEF OF STAFF FOR LOGISTICS, 500 ARMY PENTAGON, WASHINGTON, DC 20310-0500 (Provide information copy to Commander, USALEA, ATTN: LOIA-M, New Cumberland, PA 17070-5007)

K-6.

This checklist supersedes the checklist for AR N/A, task N/A, previously published in DA Circular N/A. For assistance in responding to questions, contact the functional proponent.

Appendix L MANAGEMENT CONTROL EVALUATION CHECKLIST

L-1. FUNCTION: SPECIALIZED REPAIR ACTIVITIES (SRA)

L-2. PURPOSE:

To assist Division ADCS/Overseas MACOM DCSLOG in evaluating their key management controls. It is not intended to cover all controls.

L-3. INSTRUCTIONS:

Answers must be based on the actual testing of controls (e.g. document analysis, direct observation, interviewing, sampling, simulation, other). Answers which indicate control problems must be explained (and corrective action indicated) in supporting documentation. These controls must be evaluated in accordance with the schedule in the Management Control Plan.

L-4. TEST QUESTIONS:

(Reference HQDA message, DALO-SMM, 051750Z Nov 93, Subject: Changes to Specialized Repair Activity (SRA) Procedures)

- a. Are requests for SRA authority being prepared with all required information/data?

- b. Has SRA authorization been obtained before depot level repairs are performed at GS level?
- c. Are annual reports which show number and costs of depot level repairs performed being submitted in a timely manner?

ASSESSABLE UNIT MANAGER: (Sign and Date)

L-5. COMMENTS:

Help make this a better review tool. Submit comments to the HQDA functional proponent: DALO-SMM, DEPUTY CHIEF OF STAFF FOR LOGISTICS, 500 ARMY PENTAGON, WASHINGTON, DC 20310-0500 (Provide information copy to Commander, USALEA, ATTN: LOIA-M New Cumberland, PA 17070-5007)

L-6.

This checklist supersedes the checklist for AR N/A, task N/A, previously published in DA Circular N/A. For assistance in responding to questions, contact the functional proponent.

Appendix M MANAGEMENT CONTROL EVALUATION CHECKLIST

M-1. FUNCTION: SPECIALIZED REPAIR ACTIVITY (SRA)

M-2. PURPOSE:

To assist AMC MSC COMMANDER/MAINTENANCE DIRECTOR in evaluating their key management controls. It is not intended to cover all controls.

M-3. INSTRUCTIONS:

Answers must be based on the actual testing of controls (e.g. document analysis, direct observation, interviewing, sampling, simulation, other). Answers which indicate control problems must be explained (and corrective action indicated) in supporting documentation. These controls must be evaluated in accordance with the schedule in the Management Control Plan.

M-4. TEST QUESTIONS:

(Reference HQDA Message, DALO-SMM, 051750Z Nov 93, Subject: Changes to Specialized Repair Activity (SRA) Procedures)

- a. Have primary and alternate points of contact for SRA been assigned?
- b. Have suspense controls been implemented?
- c. Is there a standard system developed for evaluating and tracking SRA requests?
- d. Are all actions coordinated with DESCOM prior to final action?
- e. Are approvals signed at GO/SES level?
- f. Are information copies of approvals provided to HQAMC, LOGSA, and LEA as required?
- g. Are recommended disapprovals forwarded through channels to HQDA for final action?
- h. Are required reports provided on time?

ASSESSABLE UNIT MANAGER: (Sign and Date)

M-5. COMMENTS:

Help make this a better review tool. Submit comments to the HQDA functional proponent: DALO-SMM, DEPUTY CHIEF OF STAFF FOR LOGISTICS, 500 ARMY PENTAGON, WASHINGTON, DC 20310-0500 (Provide information copy to Commander, USALEA, ATTN: LOIA-LM, New Cumberland, PA 17070-5007)

M-6.

This checklist supersedes the checklist for AR N/A, task N/A, previously published in DA Circular N/A. For assistance in responding to questions, contact the functional proponent.

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